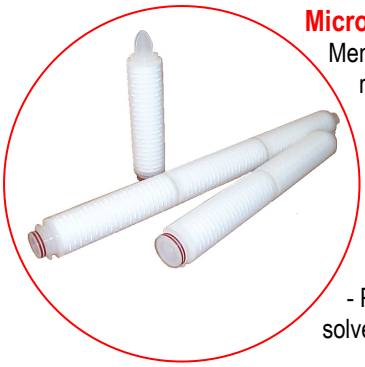
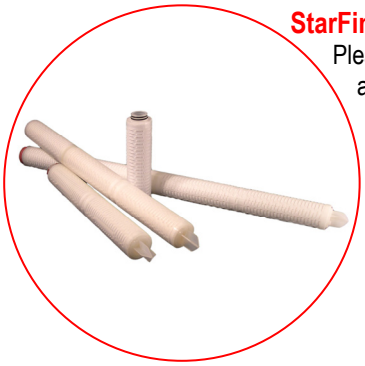
Standard filter elements



MicroFine

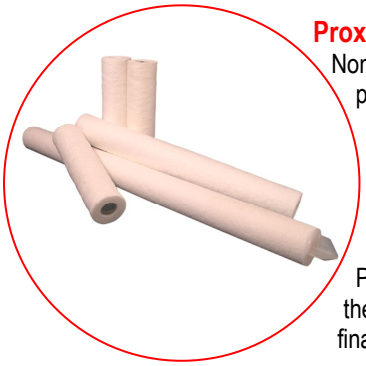
Membrane filter cartridges to remove bacteria and sub-micronic particles from fluids. Various membranes are available:
- polietheresulfone and nylon for aqueous fluids.
- PTFE, hydrophobic for solvents, venting and gases.



StarFine

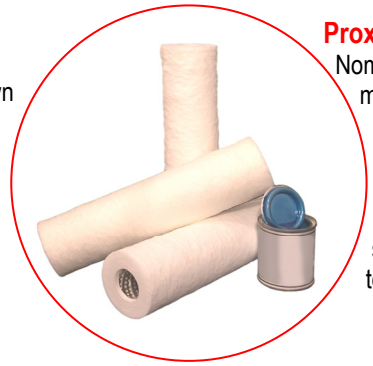
Pleated filter elements for fine applications, they have a good mechanical strength to withstand critical processes and sterilization “in line”

- Large filter area
- Very low pressure loss
- High dirt capacity



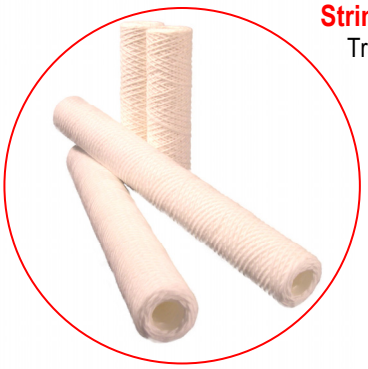
Proxis - A & Proxis - T

Nominal and absolute polypropylene melt-blown filter cartridge provided with inner core for a heavy duty.
Available with or Without end-caps, Proxis always offers the best yield for pre and final filtration.



Proxis Nylon

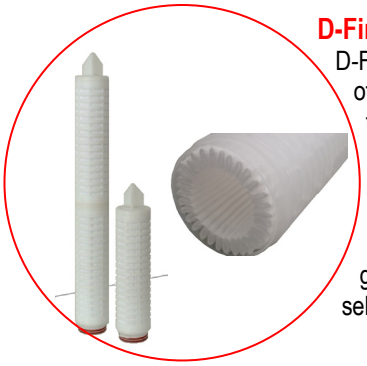
Nominal and absolute nylon melt-blown filter cartridge provided with nylon or metallic inner core.
The best alternative to polypropylene whenever solvents and/or high temperature are involved



StringFine

Traditional wound cartridges made from:

- Polypropylene
- Polyester
- Cotton
- Glass fiber



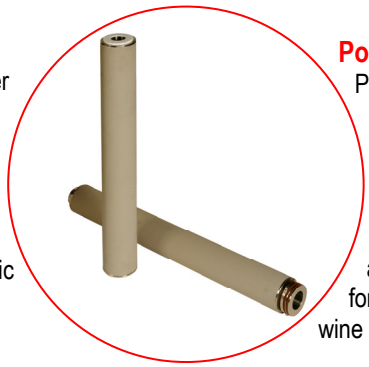
D-Fine

D-Fine was designed with the aim of combining a large filter area together with the high dirt capacity offered by a depth filter media.
The multilayer depth filter media is pleated and guarantees a progressive selection of the particles.

StarMesh

Heavy-duty wire mesh filter elements, suitable for a variety of applications

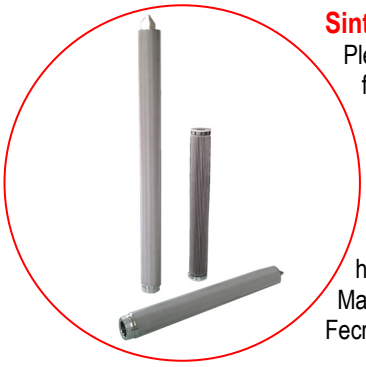
- High permeability
- Temperature resistant
- Suitable for organic solvents



PoroFine

Porous stainless-steel filter tubes for steam and hot fluids.
Standard and special dimensions can be provided. PoroFine is also suitable as “sparger” for gas diffusion in beer, wine and soft-drinks.

Special filter elements

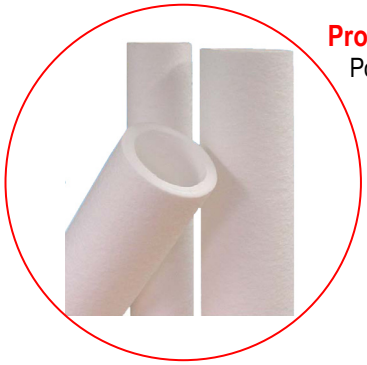


SintFine

Pleated and non pleated filter elements integrally welded.
Filter media made from sintered metal fibre to offer accurate micron retention and a good dirt holding capacity.
Materials 316 ss, Hastelloy, Fecralloy and others

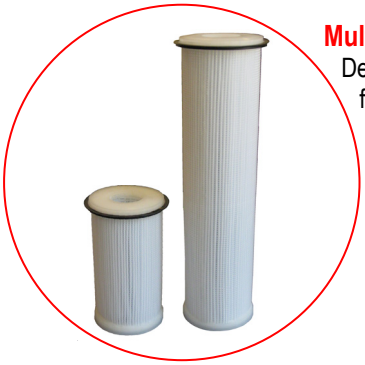
HIGH-FLO

Nominal outer diameter:	ø6" – 152 mm
Internal diameter:	ø75 mm
Available lengths:	20" – 40" – 60" – 80"
Pleated filter media:	polypropylene or borosilicate
Structure material:	polypropylene
Micron retention:	0.6 µm to 100 µm
Filter area:	3 m² to 12 m² in relation to the length



Proxis - HF

Polypropylene "melt-bown" filter cartridges
Large internal diameter to allow high flow-rate with minimum differential pressure



MultiFine - MS

Designed to fit conventional bag filter housings, fluid direction from inside to outside.
MultiFine MS assures a long Life, very quick filter change and minimum loss of product

Standard filter bags

- Standard filter bags made from polypropylene, polyester, nylon and viscose felt
- "Long life" filter bags
- Nylon monofilament cleanable filter bags
- High efficiency and oil absorber melt-blown filter bags

All of them available with metal or plastic sealing ring in the four standard sizes plus the innovative "Size 6" to double the bag surface.

SX / SY adaptors

SX and SY restrainer baskets are designed to hold special filter bags longer than the standard ones. They fit standard housings replacing the original restrainer basket, the result is twice as much filter area with no interventions on the original equipment

Cartridge filter housings

LV1SS

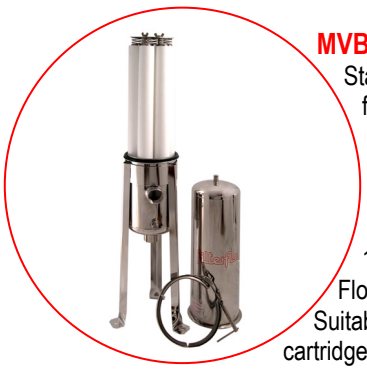
Standard single cartridge filter housings, cost effective and ideal for little flow-rates

- 316 ss construction
- Max pressure 10 bar
- Various cartridge end-caps accepted

LD1

Heavy duty standard single cartridge filter housings, ideal in compressed gas service as the bowl is hold by means of a threaded nut

- 316 ss construction
- Max pressure 12 bar
- Various cartridge end-caps accepted



MVB

Standard multi-cartridge filter housings for medium flow rate

Available as 3, 6, and 7-round filter elements in the typical lengths of 10” 20” 30” 40”

Flow rates to 45 mc/h

Suitable for all standard cartridge configurations

MR

Standard multi-cartridge filter housings for high flow rate

Available as 9 and 12-round filter elements in the typical lengths of 10” 20” 30” 40”

Flow rates to 80 mc/h

Suitable for all standard cartridge configurations

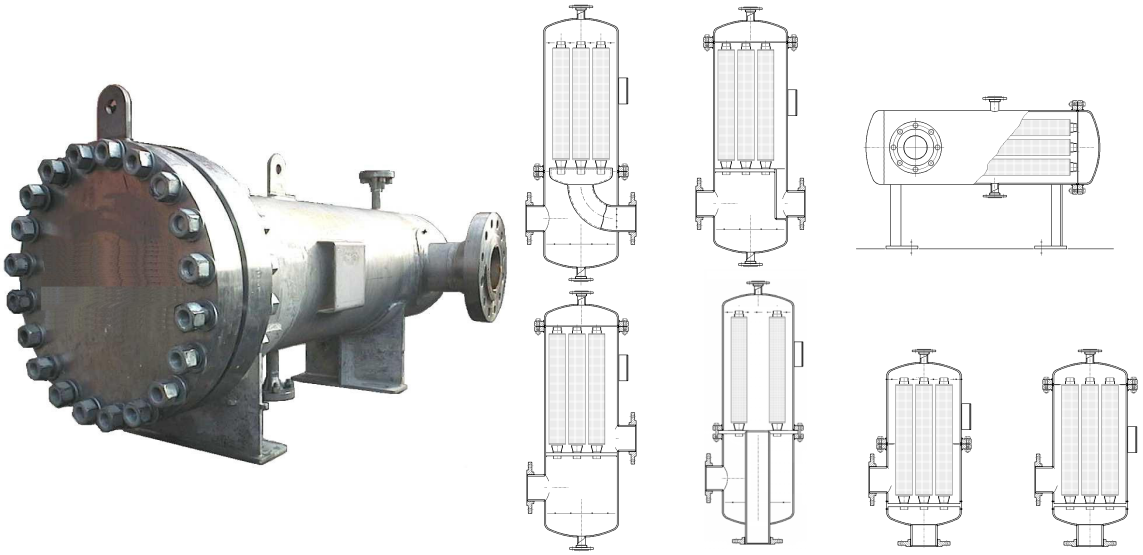
SV

Sanitary range for fine and ultra-fine applications

Mechanically polished to a minimum roughness.

Versions to hold 1, 3, 5 and 8-round filter elements are available in the typical lengths of 10” 20” 30” 40”.

Special cartridge filter housings



HB series – Many configurations to be designed according to customer specifications

Bag filter housings

MRS1

Classic single bag filter housings manufactured by automated processes to provide high quality and consistency.

- Standard material 316L ss
- Hinged lid
- Automated welding system in Argon
- Patented bag seat
- Surface finish according to "food & beverage" standards

PGS1 – QGS1

Cost effective single bag filter housings designed for industrial applications

- Standard material 304 ss
- Automated welding system in Argon
- Patented bag seat
- Very small internal volume, minimum loss of product
- Lid held by means of standard eye nuts, PTFE gasket could be successfully compressed

TGS1

Heavy duty TOP-INLET PN16 bag filter housings

- Best value for money
- Design pressure 16 bar
- Hinged lid
- No tools to open and close the lid
- Closing the lid presses on the filter bag sealing ring
- Reliable sealing of the lid also with rigid PTFE O-Rings

HVS

Quick release multi-bag filter housing

- Tangential outlet for complete drainage
- Vee-band quick release docking system
- Easy lid lifting by means of a balance mechanism
- User safety; lid can be opened only when internal pressure is at zero

MicroFine MFPA

Asymmetric polyetheresulfone (PES) Membrane filter cartridge

TYPICAL APPLICATIONS

- Sterile filtration for water, bottled water, wine, beer and/or other beverages
- Bacteria removal of API, LPV, bloodserum, biologicals, buffers, culture media and other pharmaceutical
- Ultrapure water and disk, display, multi silicon process water in electronics
- Fine chemicals, process water

FEATURES AND BENEFITS

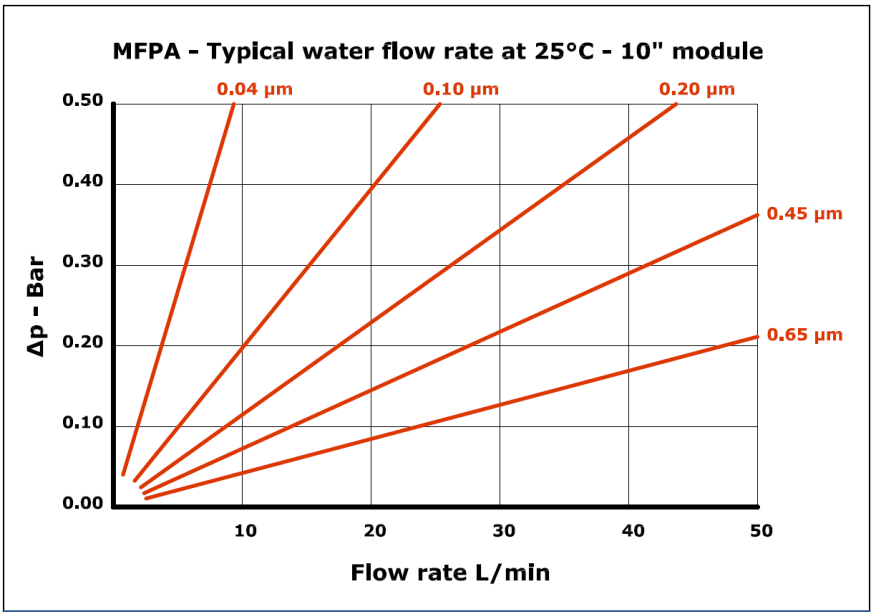
- Absolute rated inherently hydrophilic PES membrane filter for sterilizing grade filtration
- Highly asymmetric PES membrane that provides high dirt holding capacity and long service life
- Higher throughput and flow rate than any other sterilizing grade filter cartridge
- Low protein binding, suit for a broad range of pharmaceutical products
- Excellent resistance to hydrolysis allows use in Ultra-Pure Water (UPW) systems

SPECIFICATIONS

Materials of construction	Filter media	Asymmetric PES membrane
	Support layers	Polypropylene
	Micron rating	0.04, 0.1, 0.2, 0.45, 0.65, 0.85, 1.2 µm
	Inner core	Reinforced polypropylene or 316 ss
	Outer cage	Reinforced polypropylene
	End Caps	Polypropylene / 316 ss insert
	Sealing Method	Thermal bonded, No adhesives
	O-rings/Gaskets	Silicone, Nitrile, EPDM, Viton, PTFE
Cartridge dimensions	Outer diameter	69 mm
	Inner diameter	33 mm
	Nominal Lengths available	10" - 20" - 30" - 40"
	Filter area (m^2)	0,65 m^2 per 10"
Operating conditions	Normal Operating Temp.	Up to 60°C
	Max Operating Temperature	short time 85°C at Δp < 1 bar
	Normal Flow (OUT>IN)	collapsing at 4.2 bar of Δp at T= 25°C
	Reverse Flow (IN>OUT)	bursting at 2.1 bar of Δp at T= 25°C
	Ph compatibility range	2 to 13
	Steam Sterilization in situ	121°C time 30 min. (total 8 hours)
Cartridge safety	Endotoxins	< 0.25 EL/ml
	Extractables	0.03 g/10"

CARTRIDGE CODE SELECTION

MFPA-	045	3	P7	S	A
SERIES	**MICRON RETENTION**	**NOMINAL LENGTH**	**CONFIGURATION**	**GASKET MATERIAL**	**GRADE**
MFPA-	**004** - 0.04 µm	**1** - 10"	**A1** - DOE	**S** - Silicone	_ - ANY PURPOSE
	020 - 0.20 µm	**2** - 20"	**P7** - 226/locking tabs/FIN	**E** - EPDM	**A** - FOOD & BEVERAGE
	045 - 0.45 µm	**3** - 30"	**P8** - 222/FIN	**V** - Viton	**P** - PHARMA
	065 - 0.65 µm	**4** - 40"	**C7** - 226/locking tabs/FLAT	**N** - NBR	**E** - ELECTRONICS
	085 - 0.85 µm	**05** - 5"	**C8** - 222/FLAT	**Q** - Encapsulated PTFE	
	120 - 1.20 µm		**P5** - 222/3 locking tabs/FIN		



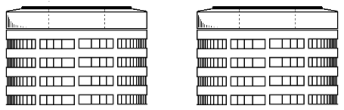
100% integrity test with purified water at 25°C (10")

CARTRIDGE CODE	TEST PRESSURE
MFPA-004*	≥ 3.0 bar
MFPA-010*	≥ 2.1 bar
MFPA-020	≥ 3.2 bar
MFPA-045	≥ 2.0 bar
MFPA-065	≥ 1.4 bar

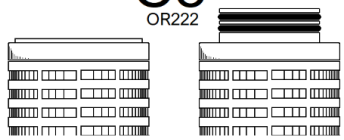
*Only for 0.04µ & 0.1µ, test fluid: 70% IPA/30% water - temperature 23°C

END-CAP CONFIGURATION

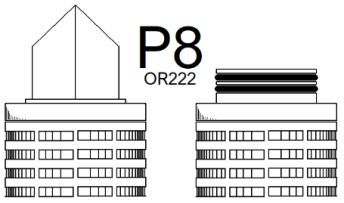
A1



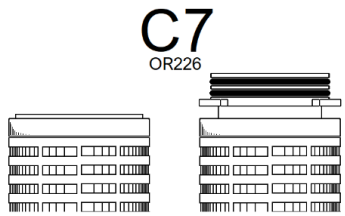
C8 OR222



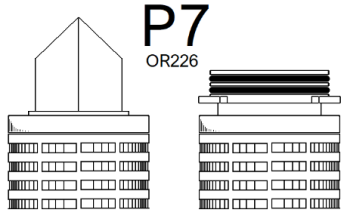
P8 OR222



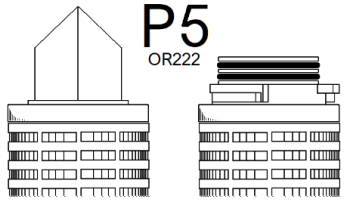
C7 OR226



P7 OR226



P5 OR222



MicroFine MFPS

Symmetric polyetheresulfone (PES) Membrane filter cartridge

TYPICAL APPLICATIONS

- Sterile filtration for water, bottled water, wine, beer and/or other beverages
- Bacteria removal of API, LPV, bloodserum, biologicals, buffers, culture media and other pharmaceutical
- Ultrapure water and disk, display, multi silicon process water in electronics
- Fine chemicals, process water

FEATURES AND BENEFITS

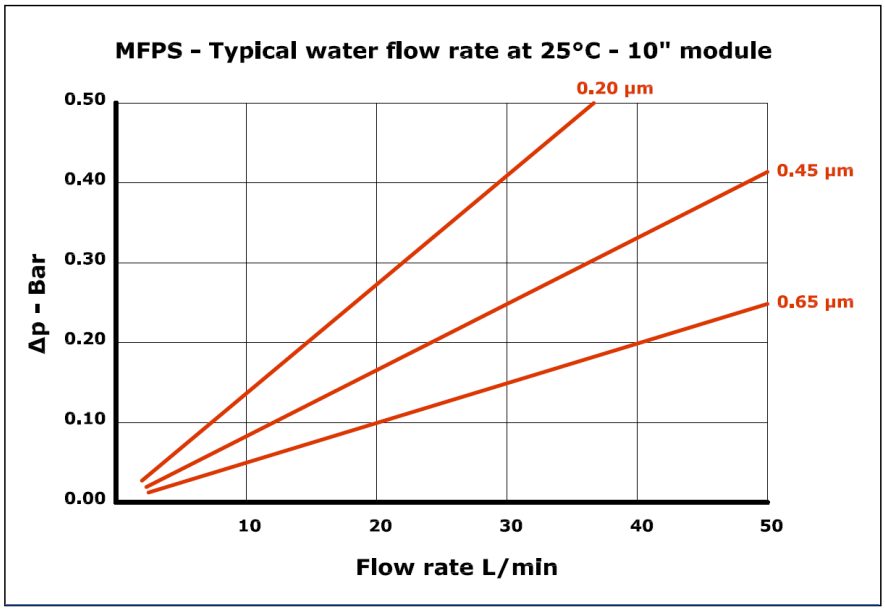
- Absolute rated inherently hydrophilic PES membrane filter for sterilizing grade filtration
- Low protein binding, suit for a broad range of pharmaceutical products
- Excellent resistance to hydrolysis allows use in Ultra-Pure Water (UPW) systems

SPECIFICATIONS

Materials of construction	Filter media	Symmetric PES membrane
	Support layers	Polypropylene
	Micron rating	0.2, 0.45, 0.65, 1.00 µm
	Inner core	Reinforced polypropylene or 316 ss
	Outer cage	Reinforced polypropylene
	End Caps	Polypropylene / 316 ss insert
	Sealing Method	Thermal bonded, No adhesives
	O-rings/Gaskets	Silicone, Nitrile, EPDM, Viton, PTFE
Cartridge dimensions	Outer diameter	69 mm
	Inner diameter	33 mm
	Nominal Lengths available	10" - 20" - 30" - 40"
	Filter area (m²)	0,65 m² per 10"
Operating conditions	Normal Operating Temp.	Up to 60°C
	Max Operating Temperature	short time 85°C at Δp < 1 bar
	Normal Flow (OUT>IN)	collapsing at 4.2 bar of Δp at T= 25°C
	Reverse Flow (IN>OUT)	bursting at 2.1 bar of Δp at T= 25°C
	Ph compatibility range	2 to 13
	Steam Sterilization in situ	121°C time 30 min. (total 8 hours)
Cartridge safety	Endotoxins	< 0.25 EL/ml
	Extractables	0.03 g/10"

CARTRIDGE CODE SELECTION

MFPS-	045	3	P7	S -	A
SERIES	**MICRON RETENTION**	**NOMINAL LENGTH**	**CONFIGURATION**	**GASKET MATERIAL**	**GRADE**
MFPS	**020** - 0.20 µm **045** - 0.45 µm **065** - 0.65 µm **100** - 1.00 µm	**1** - 10" **2** - 20" **3** - 30" **4** - 40" **05** - 5"	**A1** - DOE **P7** - 226/locking tabs/FIN **P8** - 222/FIN **C7** - 226/locking tabs/FLAT **C8** - 222/FLAT **P5** - 222/3 locking tabs/FIN	**S** - Silicone **E** - EPDM **V** - Viton **N** - NBR **Q** - Encapsulated PTFE	**A** - FOOD & BEVERAGE **P** - PHARMA **E** - ELECTRONICS

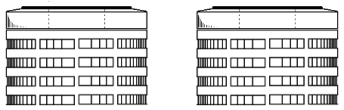


Individual integrity test
Test fluid: 70% IPA/30% water - temperature 23°C

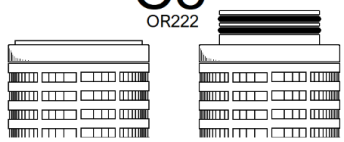
CARTRIDGE CODE	TEST PRESSURE
MFPS-020	≥ 1.2 bar
MFPS-045	≥ 0.8 bar
MFPS-065	≥ 0.6 bar

END-CAP CONFIGURATION

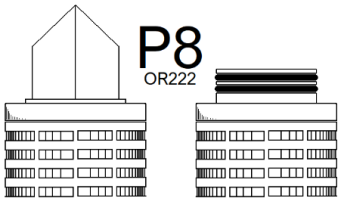
A1



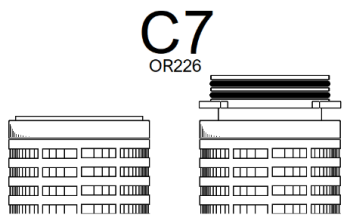
C8
OR222



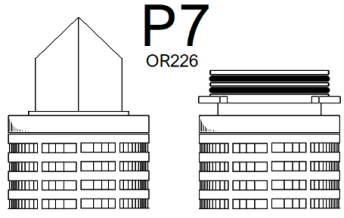
P8
OR222



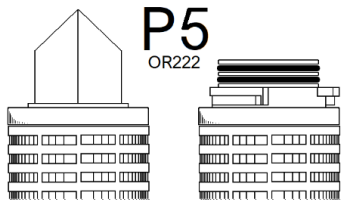
C7
OR226



P7
OR226



P5
OR222



MFNY Hydrophilic Nylon 6,6 Membrane Filter

SPECIFICATIONS

Materials of construction	Filter media	Hydrophilic Nylon 6,6 Membrane
	Support layers	Polypropylene
	Micron rating	0.1, 0.2, 0.45, 0.65, 1.0 µm
	Inner core	Polypropylene
	Outer cage, End Caps	Polypropylene
	Sealing Method	Thermal bonded, No adhesives
	O-rings/Gaskets	Silicone, Nitrile, EPDM, Viton, PTFE
Cartridge dimensions	Outer diameter	69 mm
	Inner diameter	33 mm
	Nominal Lengths available	10" - 20" - 30" - 40"
	Filter area (m²)	0,65 m² per 10"
Operating conditions	Operating Temperature	60°C
	Max operating temperature	80°C at Δp ≤ 1,0 bar
	Flow direction (OUT>IN)	collapsing at 4.2 bar of Δp at T= 25°C
	Reverse flow (IN>OUT)	bursting at 2.1 bar of Δp at T= 25°C
	Ph compatibility range	6 to 14
	Steam Sterilization in situ	135°C time 30 min. (total 3 hours)
Cartridge safety	Endotoxins	< 0.25 EL/ml
	Extractables	0.03 g/10"

FEATURES AND BENEFITS

- Naturally hydrophilic Nylon 6,6,membrane filter for sterile filtration, absolute rating ≥ 99.99%
- Chemically resistant to alkaline solutions and solvents, ideally suitable for sterile filtration of those
- Excellent flow-rate and cost effective
- High non-specific adsorption and low extractability levels
- 100% integrity test

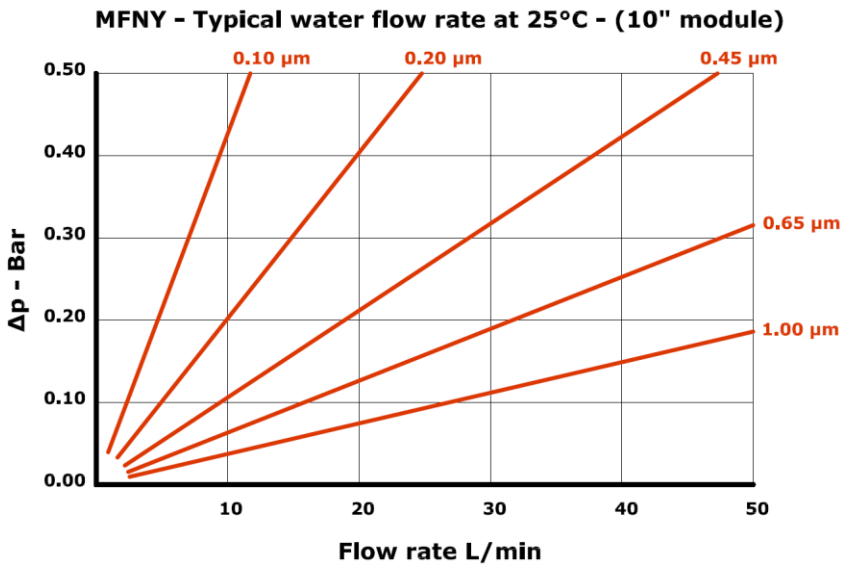
TYPICAL APPLICATIONS

- Bacteria removal from wine, bottled water, pure water
- Sterile filtration of solvents as bulk pharmaceutical chemicals, solvents for HPLC
- Fine chemicals, especially ketone, ester, ether
- Ultrapure water, multi silicon process water in electronics
- Digital inks

CARTRIDGE CODE SELECTION

MFNY - 020 3 P7 S - A

SERIES	MICRON RETENTION	nominal LENGTH	CONFIGURATION	GASKET MATERIAL	GRADE
MFNY	**010** - 0.10 µm **020** - 0.20 µm **045** - 0.45 µm **065** - 0.65 µm **100** - 1.00 µm	**1** - 10" **2** - 20" **3** - 30" **4** - 40" **05** - 5"	**A1** - DOE **P7** - 226/locking tabs/FIN **P8** - 222/FIN **C7** - 226/locking tabs/FLAT **C8** - 222/FLAT **P5** - 222/3 locking tabs/FIN	**S** - Silicone **E** - EPDM **V** - Viton **N** - NBR **Q** - Encapsulated	**A** - FOOD & BEVERAGE **P** - PHARMACEUTICAL **E** - ELECTRONICS



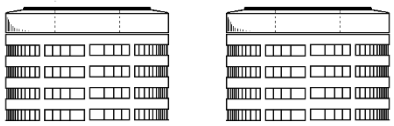
Individual integrity test

CARTRIDGE CODE	TEST PRESSURE
MFNY-010	≥ 4.50 bar
MFNY-020	≥ 3.20 bar
MFNY-045	≥ 2.00 bar
MFNY-100	≥ 0.90 bar

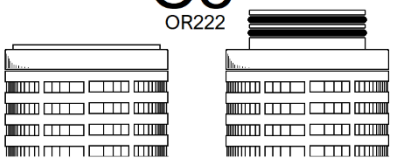
Test fluid: purified water - temperature 25°C

END-CAP CONFIGURATION

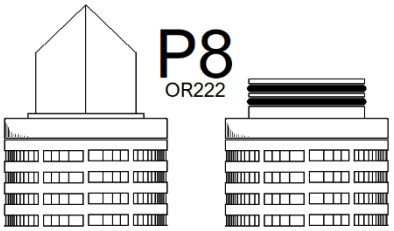
A1



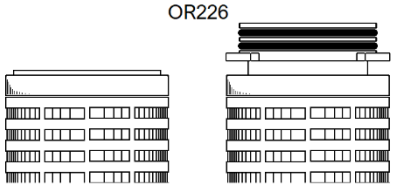
C8
OR222



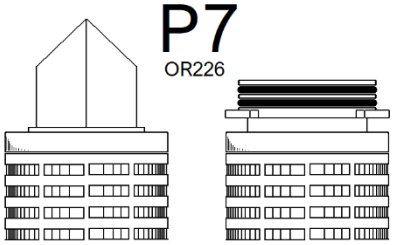
P8
OR222



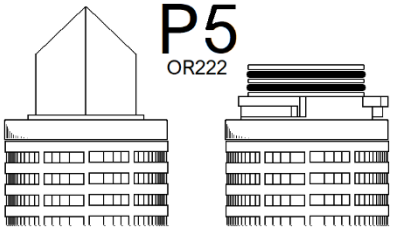
C7
OR226

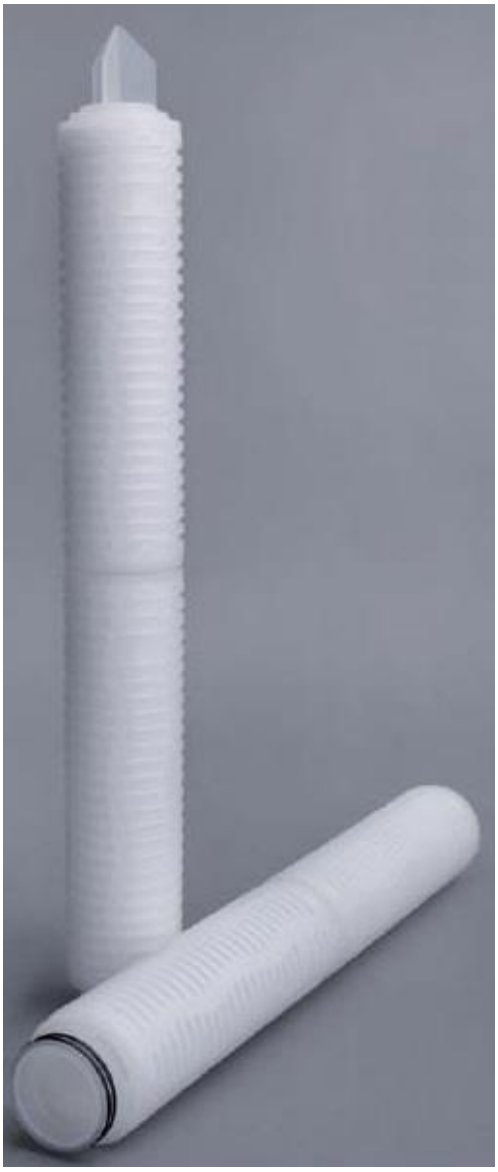


P7
OR226



P5
OR222





Hydrophilic PVDF Membrane Filter

SPECIFICATIONS

Materials of construction	Filter media	Hydrophilic PVDF membrane
	Support layers	Polypropylene
	Micron rating	0.1, 0.2, 0.45, 0.65, 1.0, 3.0 µm
	Inner core	Reinforced polypropylene
	Outer cage, End Caps	Reinforced polypropylene
	Sealing Method	Thermal bonded, No adhesives
	O-rings/Gaskets	Silicone, Nitrile, EPDM, Viton, PTFE
Cartridge dimensions	Outer diameter	69 mm
	Inner diameter	33 mm
	Nominal Lengths available	10" - 20" - 30" - 40"
	Filter area (m²)	0,65 m² per 10"
Operating conditions	Operating Temperature	recommended 65°C
	Max operating temperature	short time 90°C
	Flow direction (OUT>IN)	collapsing at 4.2 bar of Δp at T= 25°C
	Reverse flow (IN>OUT)	bursting at 2.1 bar of Δp at T= 25°C
	Ph compatibility range	1 to 13
	Steam Sterilization in situ	135°C time 30 min. (total 50 hours)
Cartridge safety	Endotoxins	< 0.25 EL/ml
	Extractables	0.03 g/10"

FEATURES AND BENEFITS

- Hydrophilic PVDF Membrane filter for liquid sterile filtration, absolute rating > 99.99%
- Low protein binding and low extractables, ideal for bioburden reduction and particle removal
- High throughput flow rate with minimal differential pressure
- Broad chemical compatibility, suitable for aggressive, high viscosity liquids
- It can withstand multiple steam sterilizations

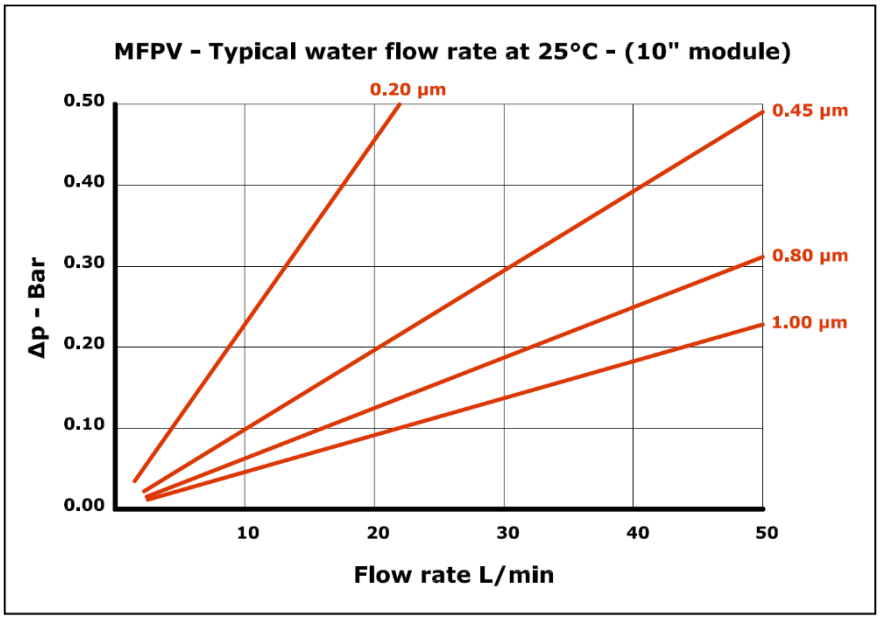
TYPICAL APPLICATIONS

- Ophthalmic, WFI
- Diagnostics, diluents, serum, tissue culture media and media additives
- Sterile filtration of high viscosity liquids
- Strong alkaline, strong acids and aggressive solvents

CARTRIDGE CODE SELECTION

MFPV - 020 3 P7 S - A

SERIES	MICRON RETENTION	nominal LENGTH	CONFIGURATION	GASKET MATERIAL	GRADE
MFPV	**020** - 0.20 µm **045** - 0.45 µm **080** - 0.80 µm **100** - 1.00 µm	**1** - 10" **2** - 20" **3** - 30" **4** - 40" **05** - 5"	**A1** - DOE **P7** - 226/locking tabs/FIN **P8** - 222/FIN **C7** - 226/locking tabs/FLAT **C8** - 222/FLAT **P5** - 222/3 locking tabs/FIN	**S** - Silicone **E** - EPDM **V** - Viton **N** - NBR **Q** - Encapsulated PTFE	**A** - FOOD & BEVERAGE **P** - PHARMA **E** - ELECTRONICS



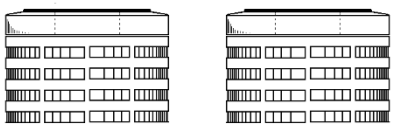
Individual integrity test

CARTRIDGE CODE	TEST PRESSURE
MFPV-020	≥ 0.60 bar
MFPV-045	≥ 0.35 bar
MFPV-080	≥ 0.25 bar
MFPV-100	≥ 0.20 bar

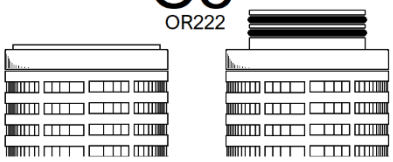
Test fluid: 70% IPA / 30% water - temp. 23°C

END-CAP CONFIGURATION

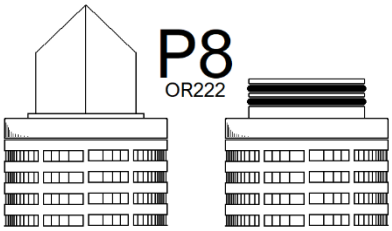
A1



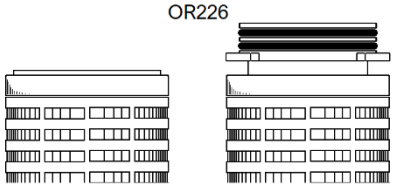
C8
OR222



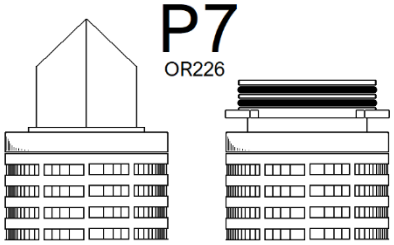
P8
OR222



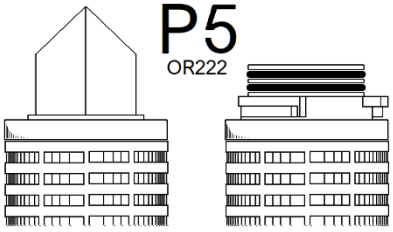
C7
OR226

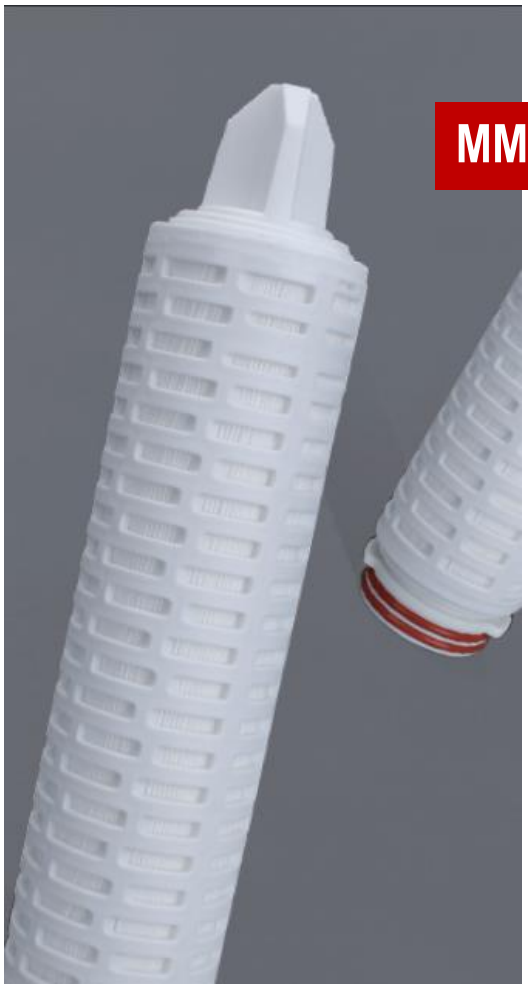


P7
OR226



P5
OR222





MMT Hydrophobic PTFE Membrane Filter

SPECIFICATIONS

Materials of construction	Filter media	Hydrophobic PTFE membrane
	Support layers	Polypropylene
	Micron rating	0.1, 0.2, 0.45 µm
	Inner core	Reinforced polypropylene or 316 ss
	Outer cage	Reinforced polypropylene
	End Caps	Polypropylene / 316 ss insert
	Sealing Method	Thermal bonded, No adhesives
	O-rings/Gaskets	Silicone, Nitrile, EPDM, Viton, PTFE
Cartridge dimensions	Outer diameter	69 mm
	Inner diameter	33 mm
	Nominal Lengths available	10" - 20" - 30" - 40"
	Filter area (m²)	0,65 m² per 10"
Operating conditions	Operating Temperature	Up to 65°C
	Max operating temperature	short time 90°C at Δp < 1 bar
	Flow direction (OUT>IN)	collapsing at 4.2 bar of Δp at T= 25°C
	Reverse flow (IN>OUT)	bursting at 2.1 bar of Δp at T= 25°C
	Ph compatibility range	1 to 14
	Steam Sterilization in situ	121°C time 30 min. (total 50 hours)
Cartridge safety	Endotoxins	< 0.25 EL/ml
	Extractables	0.03 g/10"

FEATURES AND BENEFITS

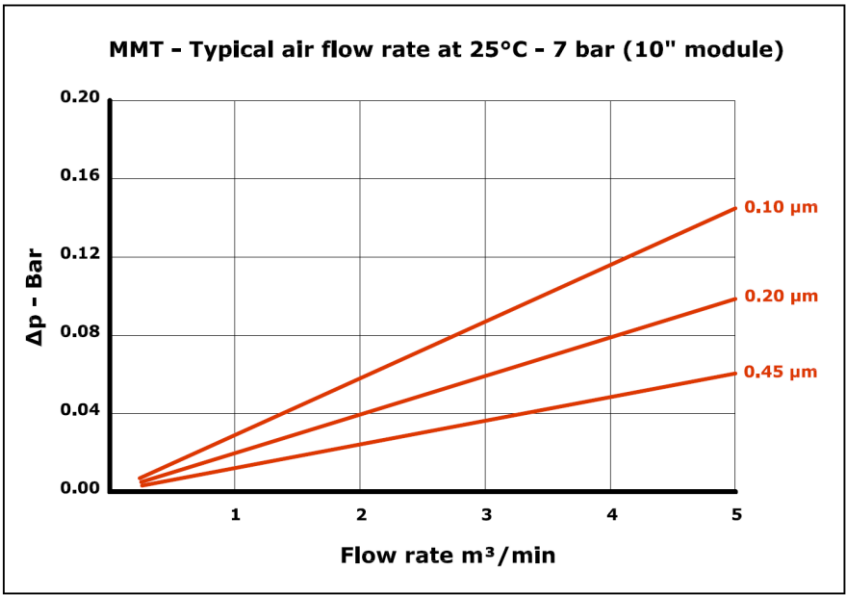
- Naturally hydrophobic PTFE Membrane with excellent porosity, high flow rate
- Absolute rating, filtration efficiency ≥ 99.99%, finest retention in gas filtration 0.01 µm
- Low pressure drop and long service life
- Wide chemical compatibility, resistant to strong alkali, acids, aggressive gases and solvents
- High temperature endurance performance
- 100% integrity tested before final assembly

TYPICAL APPLICATIONS

- Tank venting
- Sterile air and gas filtration
- Sterile compressed air fermentation
- Strong alkaline, strong acids and aggressive solvents

CARTRIDGE CODE SELECTION

MMT-	045 -	30 -	P7 -	S -	A
SERIES	**MICRON RETENTION**	**NOMINAL LENGTH**	**CONFIGURATION**	**GASKET MATERIAL**	**GRADE**
MMT	**020** - 0.20 µm **045** - 0.45 µm **080** - 0.80 µm **100** - 1.00 µm	**10** - 10" **20** - 20" **30** - 30" **40** - 40" **05** - 5"	**A1** - DOE **P7** - 226/locking tabs/FIN **P8** - 222/FIN **C7** - 226/locking tabs/FLAT **C8** - 222/FLAT **P5** - 222/3 locking tabs/FIN	**S** - Silicone **E** - EPDM **V** - Viton **N** - NBR **Q** - Encapsulated PTFE	**A** - FOOD & BEVERAGE **P** - PHARMA **E** - ELECTRONICS



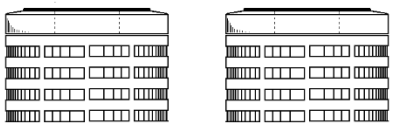
Individual integrity test

CARTRIDGE CODE	TEST PRESSURE
MMT-010	≥ 1.3 bar
MMT-020	≥ 0.9 bar
MMT-045	≥ 0.4 bar

Test fluid: 70% IPA / 30% water - temp. 23°C

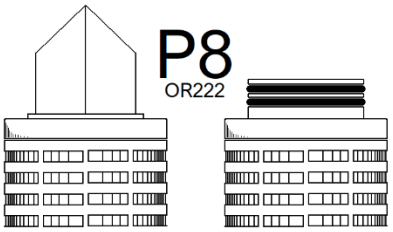
END-CAP CONFIGURATION

A1

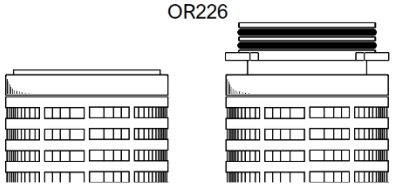


C8 OR222

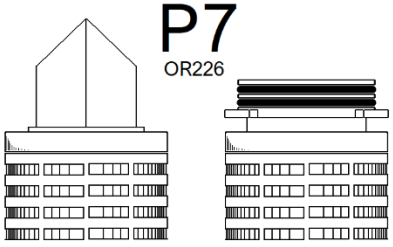
P8 OR222



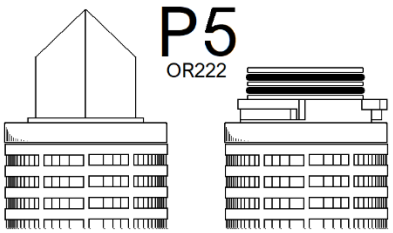
C7 OR226



P7 OR226



P5 OR222



MicroPref II

SPECIFICATIONS

Materials of construction	Filter media	Polypropylene melt-blown
	Support layers	Polypropylene
	Micron rating	0.5, 0.6, 1.0, 3.0, 5.0 µm
	Inner core	Polypropylene
	Outer cage, End Caps	Polypropylene
	Sealing Method	Thermal bonded, No adhesives
	O-rings/Gaskets	Silicone, Nitrile, EPDM, Viton, PTFE
Cartridge dimensions	Outer diameter	69 mm
	Inner diameter	33 mm
	Nominal Lengths available	10" - 20" - 30" - 40"
	Filter area (m²)	0,65 m² per 10"
Operating conditions	Operating Temperature	recommended 60°C
	Max operating temperature	80°C at 0,8 bar max of Δp
	Flow direction (OUT>IN)	collapsing at 4.2 bar of Δp at T= 25°C
	Reverse flow (IN>OUT)	bursting at 2.1 bar of Δp at T= 25°C
	Ph compatibility range	1 to 14
	Steam Sterilization in situ	121°C time 30 min. (total 15 hours)
Cartridge safety	Endotoxins	< 0.25 EL/ml
	Extractables	0.03 g/10"

FEATURES AND BENEFITS

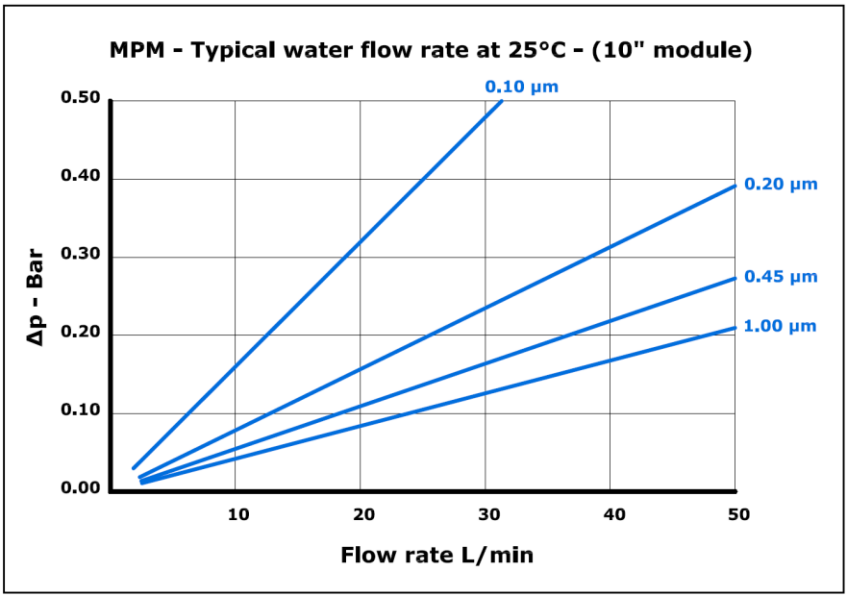
- Graded density ultra-fine polypropylene filter media, ß= 5000, efficiency 99.98%
- Pleated depth filter media to assure maximum dirt holding capacity
- 100% polypropylene construction offers broad chemical compatibility
- Excellent protection to membrane cartridges as final stage of filtration
- Virtually no fibre migration

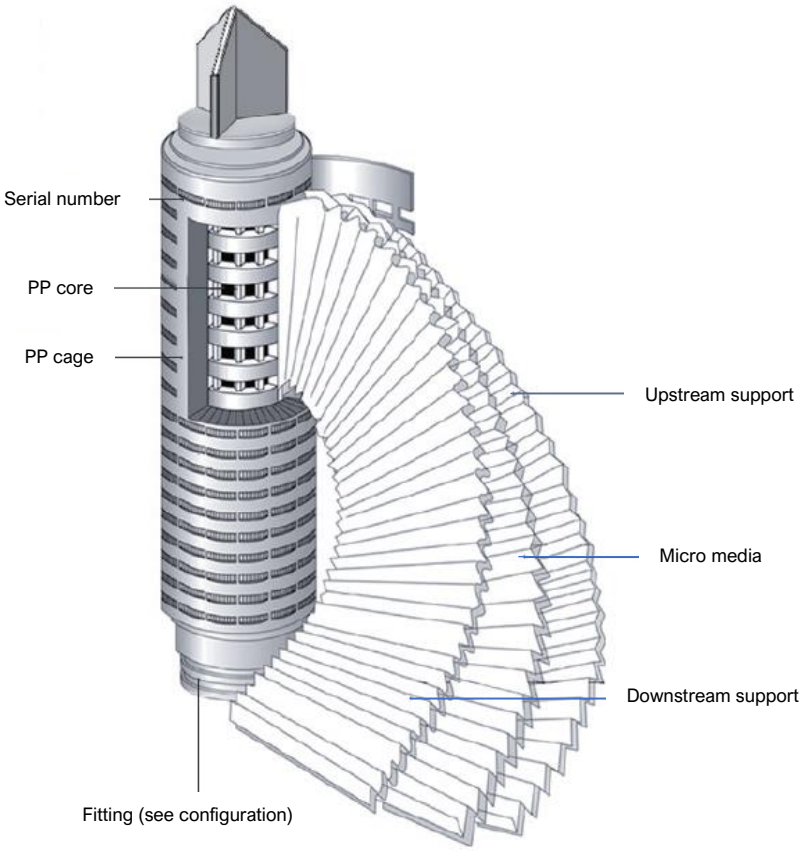
TYPICAL APPLICATIONS

- Pharmaceutical; APIs; Biologics
- Fine chemicals; Plating solutions; Ink
- Food & Beverage; Wine, Beer, Table water
- Electronics; Semi-conductors; LCD Displays

CARTRIDGE CODE SELECTION

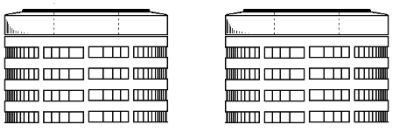
MPM -	0100	K3	P7	S -	A
SERIES	**MICRON RETENTION**	**nominal LENGTH**	**CONFIGURATION**	**GASKET MATERIAL**	**GRADE**
MPM	**0050** - 0.10 µm **0060** - 0.20 µm **0100** - 1.00 µm **0300** - 3.00 µm **0500** - 5.00 µm	**K1** - 10" **K2** - 20" **K3** - 30" **K4** - 40" **K05** - 5"	**A1** - DOE **P7** - 226/locking tabs/FIN **P8** - 222/FIN **C7** - 226/locking tabs/FLAT **C8** - 222/FLAT **P5** - 222/3 locking tabs/FIN	**S** - Silicone **E** - EPDM **V** - Viton **N** - NBR **Q** - Encapsulated PTFE	**A** - FOOD & BEVERAGE **P** - PHARMA **E** - ELECTRONICS



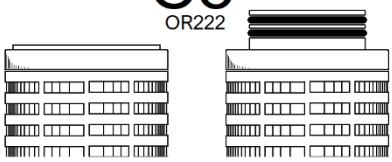


END-CAP CONFIGURATION

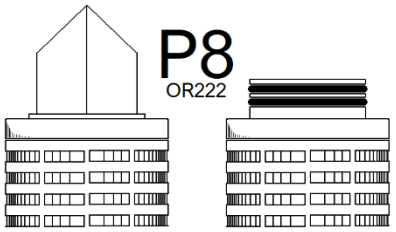
A1



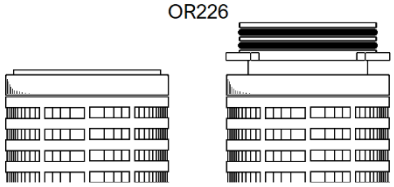
C8
OR222



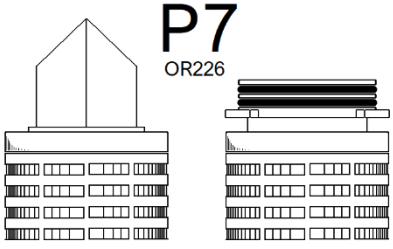
P8
OR222



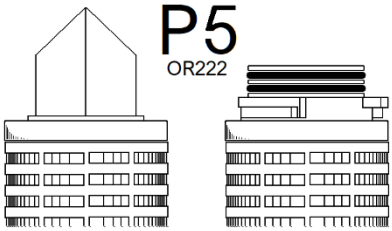
C7
OR226



P7
OR226



P5
OR222



StarFine

Pleated filter elements

StarFine, is not only the best choice for a good protection of membrane filter elements, the large filter area guarantees high dirt capacity and consequently a long life. A wide choice of filter media is available to make it suitable for several process applications.

End-Cap configurations:

- **A1** = Double open ended with flat gaskets
- **C8** = O.R. 2-222 + capped - flat
- **P8** = O.R. 2-222 + capped with spear
- **C7** = O.R. 2-226 + bayonet - capped flat
- **P7** = O.R. 2-226 + bayonet – capped with spear
- **C9** = O.R. 2-225 + capped flat
- **P9** = O.R. 2-225 + capped with spear

Standard nominal lengths:

- **1** = 10" = 250 mm
- **2** = 20" = 500 mm
- **3** = 30" = 750 mm
- **4** = 40" = 1000 mm

Structure materials:

- **outer cage:** polypropylene
- **inner core:** polypropylene
- **end-caps:** polypropylene

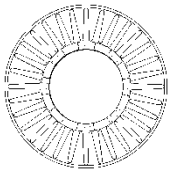
All **StarFine** filter elements are provided with a multi-layer filter media with thermo-bonded fibres to prevent fiber release and contaminant downloading, most of them take advantage of polypropylene melt-blown microfibers to enhance filtration efficiency on very small particles.
The range comprehends also two borosilicate (glass fiber) and two polyester filter media. Borosilicate has a natural charge (Z potential) to capture organic matter, while polyester guarantees high permeability when only large particles have to be captured.

Main applications

- Sugar solution
- Trap filters in breweries
- Filtration and/or pre-filtration of wine
- Rinse water
- Spirits
- Injection water
- Demineralised water
- Fluids of ultra-sonic cleaning systems
- Tank venting
- Moisture in air

StarFine

10 times the filter area of a conventional non-pleated element



CARTRIDGE CODE SELECTION

Series Identification	Filter media Material and Micron retention	Outer Cage	Cartridge Length	End-Cap # 1	End-Cap # 2	Gasket Material
StarFine = **SF**	Please select from Table 1	None = **-** Extruded = **Z** Moulded = **K**	10" = **1** 20" = **2** 30" = **3** 40" = **4**	Open = **A** Capped = **C** Spear = **P**	Open = **1** O.R. 2-222 = **8** O.R. 2-226 = **7** O.R. 2-225 = **9**	Buna = **N** Viton = **V** Silicone = **S** EPDM = **E** Encapsulated PTFE = **S-FEP**
SF	**Y50**	**K**	**3**	**P**	**8**	**S**

Table 1 - Standard filter media

Filter media code	Material	Filter area	Particles removal in liquids		
			Nominal ß = 10	Nominal ß = 100	Absolute ß = 1000
Y80	polyester	0.70 m²	55*	68*	80*
Y50	polyester	0.65 m²	25	35	50
M60	polypropylene	0.65 m²	30	40	60
M30	polypropylene	0.60 m²	15	20	30
M15	polypropylene	0.50 m²	5	12	15
M10	polypropylene	0.50 m²	3,5	7	10
M5	polypropylene	0.50 m²	1	3	5
M3	polypropylene	0.50 m²	0.6*	1.5*	3
M1	polypropylene	0.50 m²	0.45*	0.8*	1*
M06	polypropylene	0.50 m²	0.2*	0.4*	0.6*
G1	borosilicate	0.50 m²	0.45*	0.8*	1*
G06	borosilicate	0.50 m²	0.2*	0.4*	0.6*

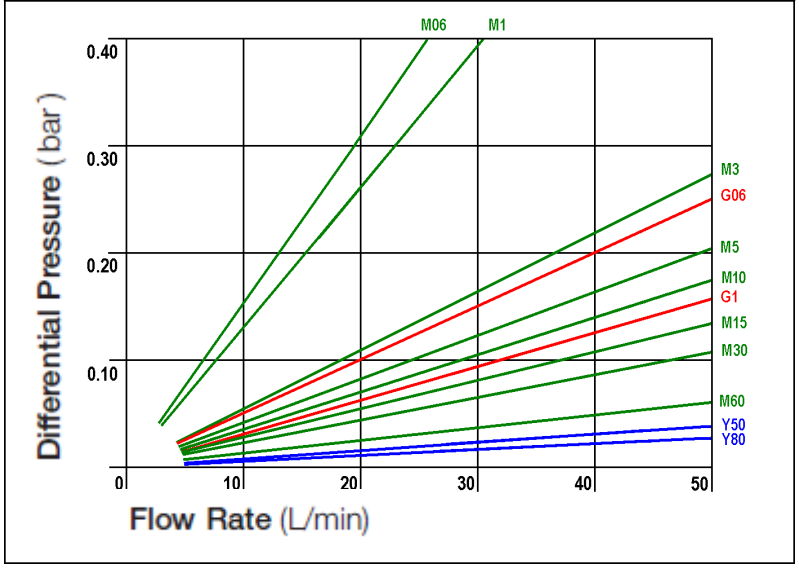
* - Extrpolated value

Table 2 - Sterilization

Method	Filter media material		
	polyester	polypropylene	borosilicate
hot water max 80°C (*)	good	good	good
caustic soda max 80°C (*)	max conc. 3%	max conc. 30%	max conc. 3%
in line steam max 120°C (*)	good	good	good
sodium hypoclorite - cold	max conc. 5%	max conc. 5%	max conc. 10%
autoclave 120°C	good	good	good

(*) - Due to the elongation, cartridges with A1 configuration could stand a temperature of 40°C in line, while they can whitstand 120°C in autoclave as well as the other configurations

Water flow-rate per 10" modules



StarFine

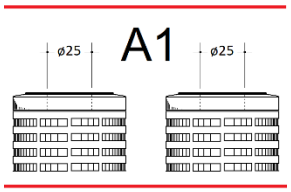
Definition of "Beta ratio"

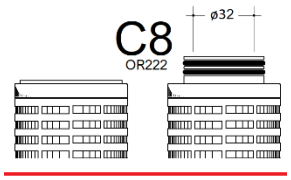
The value of "ß" for a given particle size (**x**) is the result of the following ratio:

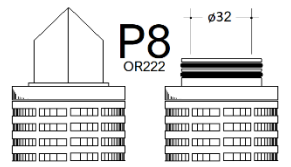
$$ß(x) = \frac{\text{n° of particles with size } >x \text{ up-stream}}{\text{n° of particles with size } >x \text{ down-stream}}$$

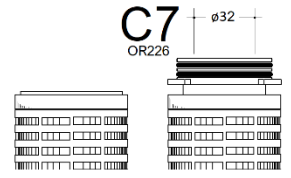
The relation between Beta ratio and efficiency, is as follows:

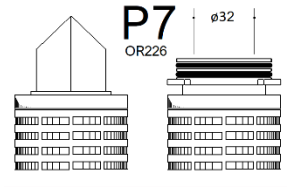
$$\text{Eff.\%} = \left(1 - \frac{1}{ß}\right) 100$$

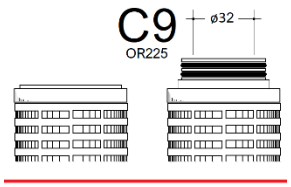


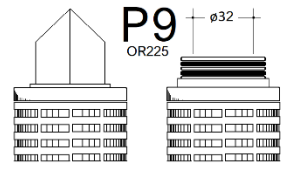












Cartridge configuration

StarFine Plus

High efficiency filter element

StarFine Plus filter cartridge offers the most efficient filter medium among filter elements intended for fine filtration, a step behind cartridges provided with absolute membranes which are much more expensive and critical to be employed.
Micron retention allows to capture particles size 0.5 µm at Beta ratio 5000 (efficiency 99.98%).

StarFine Plus is designed for all those applications where extremely accurate filtration is required while not guaranteeing sterility, in spite of that in most circumstances, StarFine Plus effluent is almost sterile if the conduction of the plant in which it is inserted, follows appropriate sanitization protocols.

The role of the StarFine Plus is therefore twofold, in many applications it constitutes an effective final barrier that guarantees a high level of purity, at the same time it can becomes the optimal prefilter upstream membrane cartridges allowing a significant extension of the operating life of these, StarFine Plus is in fact able to intercept most of the organic matter and particles present in the fluid, at low costs.

Main Applications

- Filtration of industrial process water
- Industrial water prefiltration upstream of membrane cartridges
- Final filtration in oenology (red wine)
- Prefiltration in oenology (white and sweet wines)
- Filtration of hydraulic fluids and oils for test benches
- Filtration of chemicals

CARTRIDGE CODE SELECTION

Series Identification	Filter medium Micron retention and material	Outer Cage	Cartridge Length	End-Cap # 1	End-Cap # 2	Gasket Material
StarFine = SF	Available only: 0.5 µm = M0.5 (polypropylene)	None = - Extruded = Z Moulded = K	10" = 1 20" = 2 30" = 3 40" = 4	Open = A Capped = C Spear = P	Open = 1 O.R. 222 = 8 O.R. 226 = 7 O.R. 225 = 9	Buna = N Viton = V Silicone = S EPDM = E Encapsulated PTFE = S-FEP
SF	M0.5	K	3	P	7	S

StarFine Plus

Micron retention in water according to OSU F2

Filter medium code	Filter medium material	Filter area per 10" module	Nominal ß = 1000 eff. 99,9%	Absolute ß = 5000 eff. 99,98%
M0.5	polypropylene melt-blown	0.50 m²	0.2 µm	0.5 µm

Standard configurations:

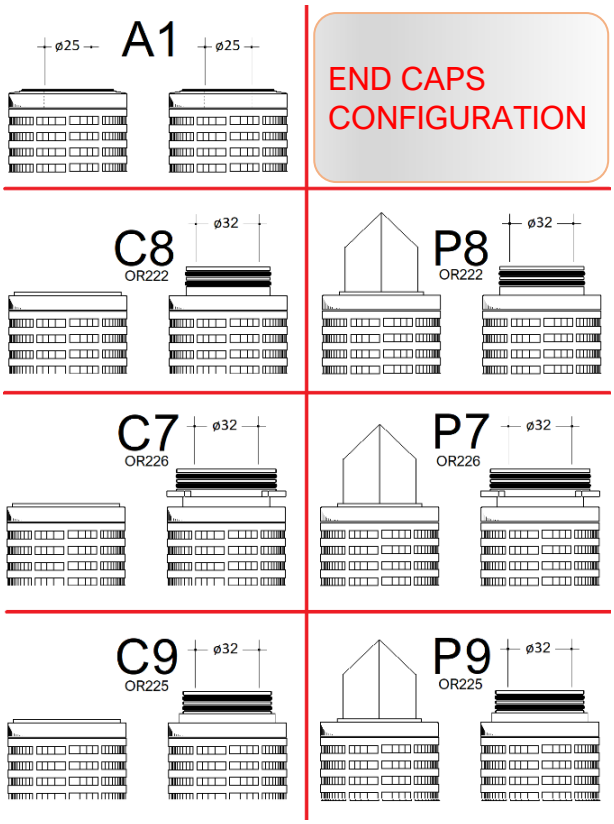
- **A1** = Double open ended with flat gaskets (ID 25 mm)
- **C8** = One end capped flat; one end provided 222 O-rings (ID 25 mm)
- **P8** = One end finned; one end provided 222 O-rings (ID 25 mm)
- **CL7** = One end capped flat; one end provided 226 O-rings (ID 35 mm)
- **PL7** = One end finned; one end provided 226 O-rings (ID 35 mm)
- **CL9** = One end capped flat; one end provided 225 O-rings (ID 35 mm)
- **PL9** = One end finned; one end provided 225 O-rings (ID 35 mm)

Standard nominal lengths:

- **1** = 10" = 250 mm – filter area 0.5 m²
- **2** = 20" = 500 mm – filter area 1.0 m²
- **3** = 30" = 750 mm – filter area 1.5 m²
- **4** = 40" = 1000 mm – filter area 2.0 m²

Structure material:

- **Outer cage:** polypropylene
- **Inner core:** polypropylene
- **End-caps:** polypropylene

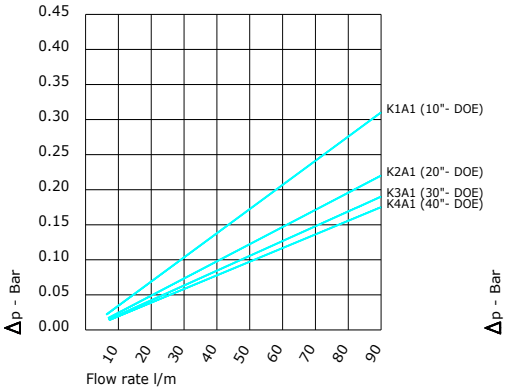


Sterilization	Filter medium material: polypropylene
hot water max 80°C (*)	suitable
caustic soda max 80°C (*)	max concentration 30%
in line steam max 120°C (*)	suitable
sodium hypoclorite - cold	max concentration 5%
autoclave 120°C	suitable

(*) - Cartridges with configuration A1 can withstand a temperature of 40°C in line autoclave sterilization limit is 120°C, as well as the other configutations

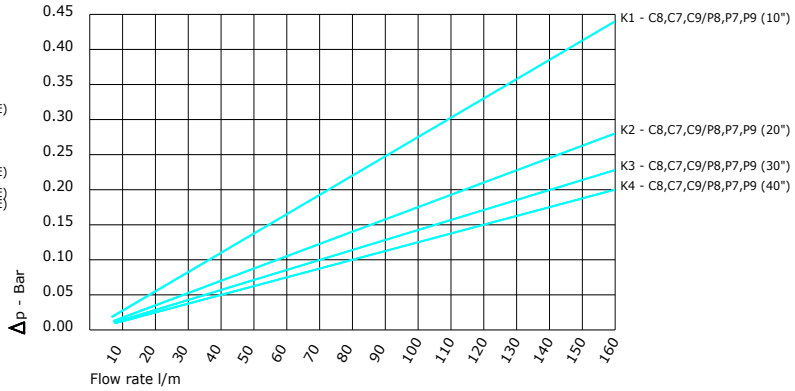
StarFine Plus

CLEAN DIFFERENTIAL PRESSURE IN WATER OF CARTRIDGES WITH CONFIGURATION A1 (ID 25 mm)
VALUES INCLUDE THE DIFFERENTIAL PRESSURE DUE TO THE FILTER HOUSING



StarFine Plus

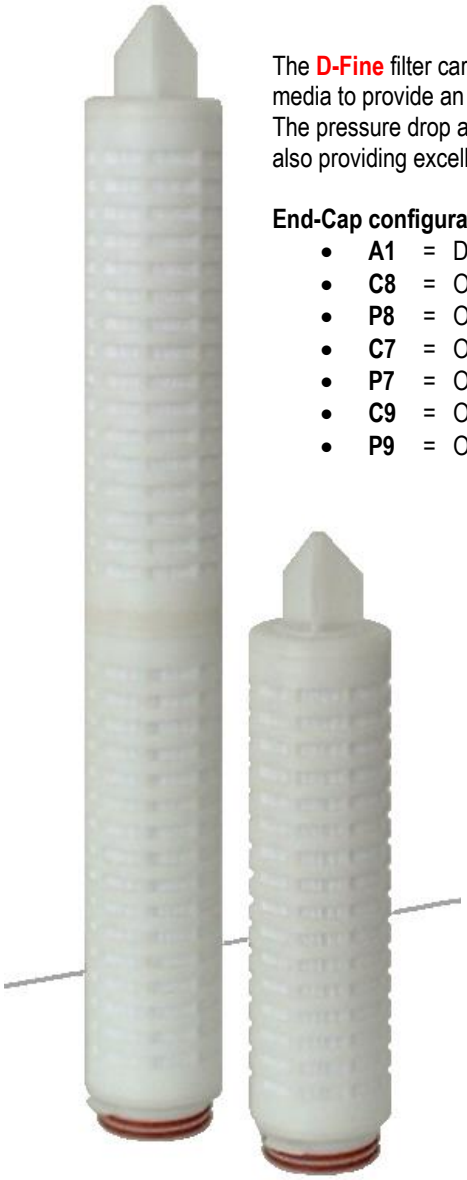
CLEAN DIFFERENTIAL PRESSURE IN WATER OF CARTRIDGES WITH CONFIGURATION C8-P8-C7-P7-C9 -P9 (ID 32 mm)
VALUES INCLUDE THE DIFFERENTIAL PRESSURE DUE TO THE FILTER HOUSING



IMPORTANT:
IT IS ADVISABLE OF NOT EXCEEDING FLOW RATES THAT CAN GENERATE AN INITIAL DIFFERENTIAL PRESSURE MAJOR THAN 0.2 BAR.
The length of the cartridges does not offer proportional advantages in terms of initial pressure drop, but it does offer important advantages in terms of duration.

D-Fine

Filter Elements
for colloids and particle removal



The **D-Fine** filter cartridge offers the benefits of a graded pore structure given by a pleated multilayer media to provide an increase in effective filtration area and service life.
The pressure drop and flow capability is comparable to competitive pleated polypropylene filters whilst also providing excellent removal of soft contaminants because of the depth of the medium.

End-Cap configurations:

- **A1** = Double open ended with flat gaskets
- **C8** = O.R. 2-222 + capped - flat
- **P8** = O.R. 2-222 + capped with spear
- **C7** = O.R. 2-226 + bayonet - capped flat
- **P7** = O.R. 2-226 + bayonet – capped with spear
- **C9** = O.R. 2-225 + capped flat
- **P9** = O.R. 2-225 + capped with spear

Standard nominal lengths:

- **1** = 10” = 250 mm
- **2** = 20” = 500 mm
- **3** = 30” = 750 mm
- **4** = 40” = 1000 mm

Structure materials:

- **outer cage:** polypropylene
- **inner core:** polypropylene
- **end-caps:** polypropylene

Main applications

Rinse water
Edible oil
Mineral oil
Emulsions, machine tools cooling
Parts washing machines
Bio-diesel fuel

CARTRIDGE CODE SELECTION

Series Identification	Filter media Material and Micron retention	Outer Cage	Cartridge Length	End-Cap # 1	End-Cap # 2	Gasket Material
D-Fine = DF	Please select from Table 1	None = - Extruded = Z Moulded = K	10” = 1 20” = 2 30” = 3 40” = 4	Open = A Capped = C Spear = P	Open = 1 O.R. 2-222 = 8 O.R. 2-226 = 7 O.R. 2-225 = 9	Buna = N Viton = V Silicone = S EPDM = E Encapsulated PTFE = S-FEP
DF	M5	K	3	P	8	E

D-Fine

Tab.1 - Standard filter media

Filter media code	Material	Filter area	Particle removal in liquids		
			Nominal ß = 10	Nominal ß = 100	Absolute ß = 1000
M60	polypropylene	0.22 m²	30	40	60
M30	polypropylene	0.22 m²	15	20	30
M15	polypropylene	0.21 m²	5	12	15
M8	polypropylene	0.20 m²	3	5	8
M5	polypropylene	0.20 m²	1	3	5
M3	polypropylene	0.19 m²	0.6*	1.5*	3
M1	polypropylene	0.19 m²	0.45*	0.8*	1*
M06	polypropylene	0.18 m²	0.2*	0.4*	0.6*
G1	borosilicate	0.19 m²	0.45*	0.8*	1*
G06	borosilicate	0.18 m²	0.2*	0.4*	0.6*

* - Extrapolated value

Definition of "Beta ratio"

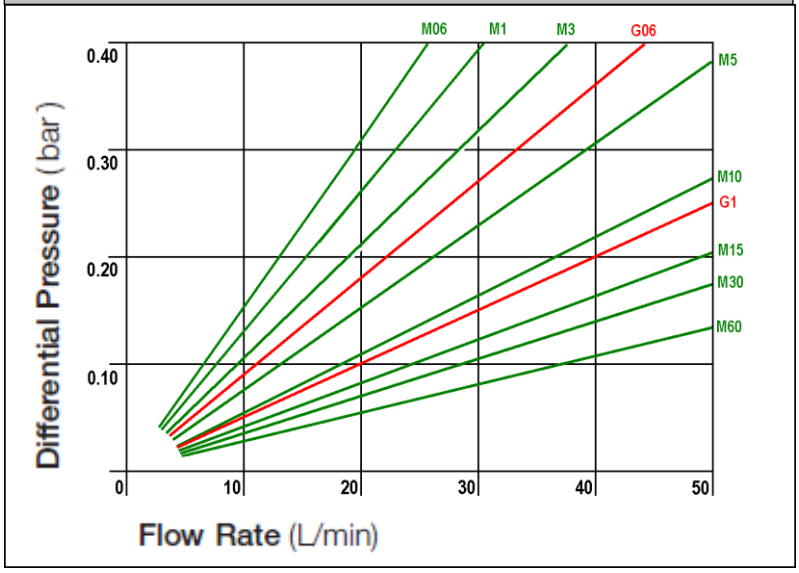
The value of "ß" for a given particle size (**x**) is the result of the following ratio:

$$ß(x) = \frac{\text{n° of particles with size } >x \text{ up-stream}}{\text{n° of particles with size } >x \text{ down-stream}}$$

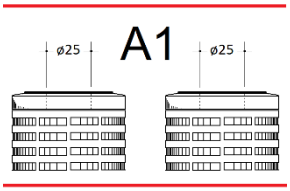
The relation between Beta ratio and efficiency, is as follows:

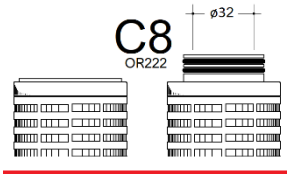
$$\text{Eff.\%} = \left(1 - \frac{1}{ß}\right) 100$$

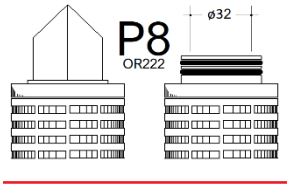
Water flow-rate per 10" module

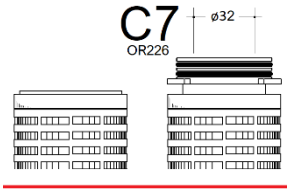


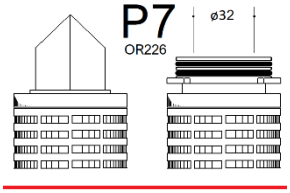
Cartridge configuration

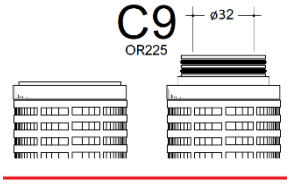


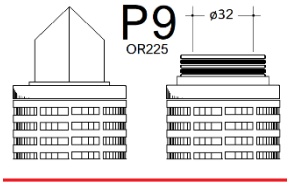












Proxis - A

Polypropylene melt-blown filter elements absolute series

- 0.5 to 120 µm absolute
- 100% polypropylene construction
- Polypropylene inner core to provide mechanical strength
- No contaminant downloading, even with high Delta P
- True graded media density

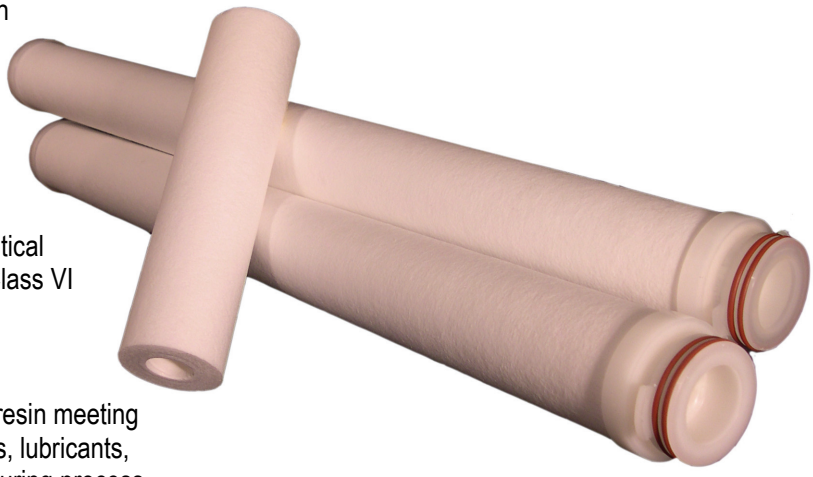
Technical specifications

Available micron ratings:

0.5,1, 3, 10, 15, 20, 40, 50, 70, 90, 120 µm absolute

Materials:

Filter media:	Polypropylene
End-Caps:	Polypropylene
Inner core:	Polypropylene
Seals:	Silicone, EPDM, Buna N, Viton



FDA compliance:

All materials meet U.S. FDA requirements for food and beverage contact

Toxicity:

Cartridge is appropriate for use in pharmaceutical applications. Components meet USP-XXIII, Class VI criteria

Purity:

Proxis cartridges are made of polypropylene resin meeting FDA regulation 21 CFR 177.1520. No Binders, lubricants, or anti-static agents are used in our manufacturing process.

Rinse-up:

Cartridges can be easily rinsed-up to 18 Megohm-cm

Efficiency in relation to the micron rating (liquid service)

Table 1

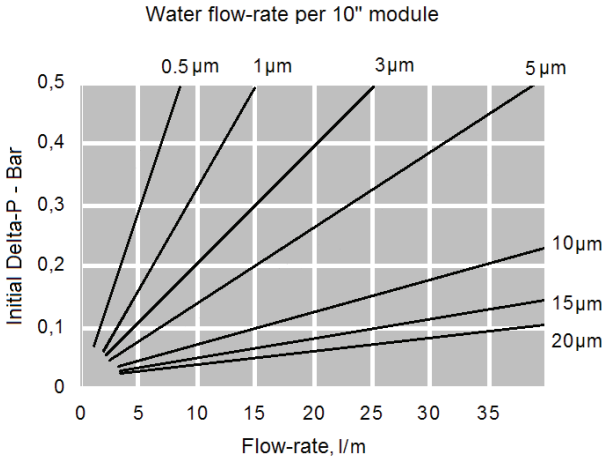
Retention micron	99,9% (ß=1000)	99% (ß=100)	95% (ß=20)	90% (ß=10)
0.5A	0.45	0.35	0.2	-
1A	0.96	0.88	0.8	0.66
3A	2.9	2.4	2.0	1.8
5A	4.8	3.0	2.7	2.2
10A	10.0	7.9	6.6	4.8
15A	14.4	13.0	12.6	11.2
20A	19.0	16.9	15.3	13.2
40A	38	33	28	21
50A	47	43	38	28
70A	66	59	54	41
90A	88	79	66	56
120A	105	95	80	65

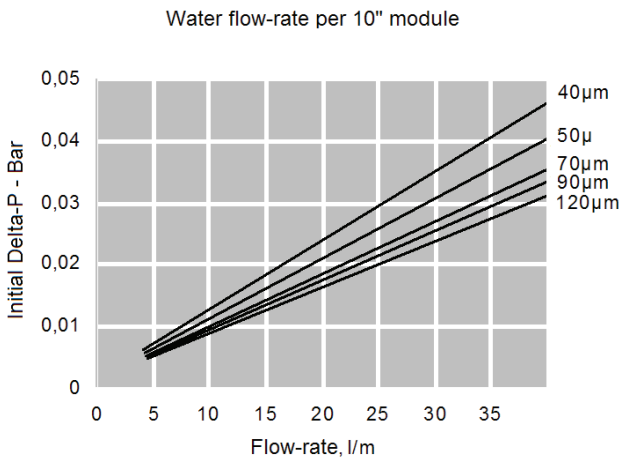
Standard inner core

A strong inner core enables the cartridge to withstand heavy working conditions. Filter media is designed only in function of filtration performance guaranteeing low pressure drop and high dirt capacity.

Proxis – A Polypropylene melt-blown filter elements - absolute series

Flow-rate versus differential pressure





Dimensions:

Nominal length:
10", 20", 30", 40"
(254, 508, 762, 1016 mm)
Outer diameter: 63.5 mm

Working conditions

Max differential pressure:

- 1.00 bar @ 82 °C
- 2.00 bar @ 66 °C
- 4.20 bar @ 24 °C

Changeout Differential Pressure
(Recommended): 2.60 bar.

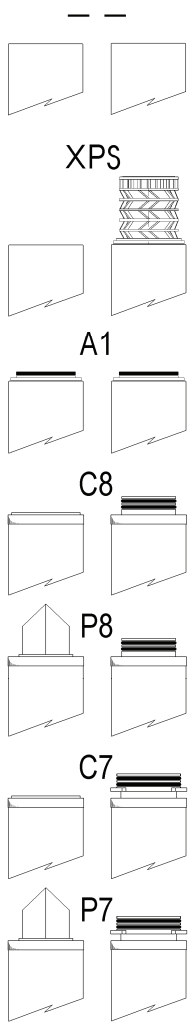
Steam sterilization:

Not recommended

Max temperature with hot water:

59 °C – double open ended versions
82° C – all single open ended versions

Cartridge configuration



CARTRIDGE CODE SELECTION

Series identification	Micron rating	Outer cage	Cartridge length	End-cap #1	End-cap #2	Gasket material
PRM	Select from Table1	None = X Net = R Cage = G	10" = 1 20" = 2 30" = 3 40" = 4	Cut End = - Open = A Flat = C Spear = P	Cut End = - PP spring = PS Open = 1 O.R. 222 = 8 O.R. 226 = 7	None = - Buna = N Viton = V Silicone = S EPDM = E PTFE = T
PRM	**3A**	**R**	**3**	**P**	**7**	**S**

Proxis - T

Polypropylene melt-blown filter elements nominal series

- 0.5 to 150 µm nominal
- 100% polypropylene construction
- Polypropylene inner core to provide mechanical strength
- No contaminant downloading, even with high Delta P
- True graded media density

Technical specifications

Available micron ratings:

0.5, 1, 3, 5, 10, 25, 40, 75, 100, 150 µm

Materials:

Filter media:	Polypropylene
End-Caps:	Polypropylene
Inner core:	Polypropylene
Seals:	Silicone, EPDM, Buna N, Viton

FDA compliance:

All materials meet U.S. FDA requirements for food and beverage contact

Toxicity:

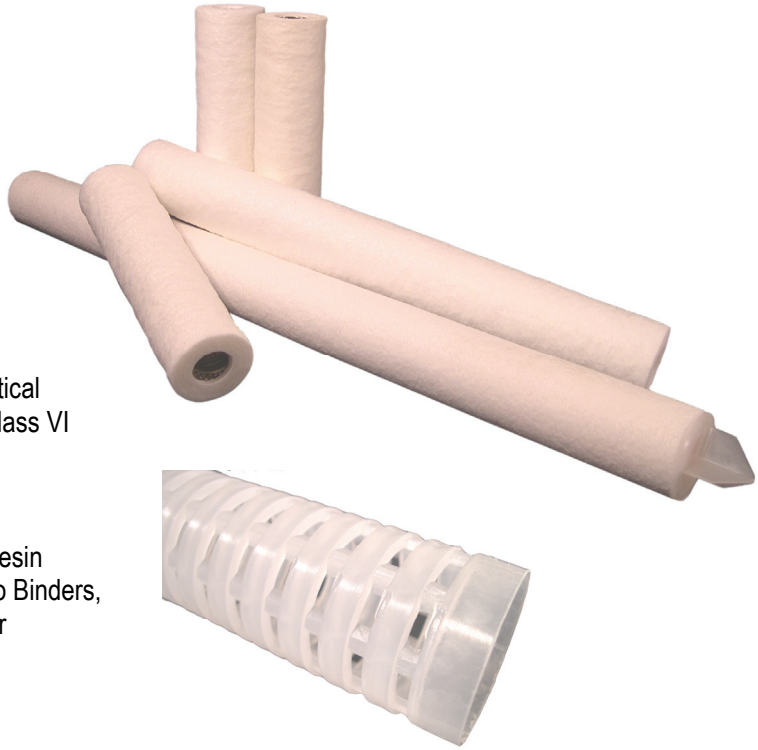
Cartridge is appropriate for use in pharmaceutical applications. Components meet USP-XXIII, Class VI criteria

Purity:

Proxis cartridges are made of polypropylene resin meeting FDA regulation 21 CFR 177.1520. No Binders, lubricants, or anti-static agents are used in our manufacturing process.

Rinse-up:

Cartridges will easily rinse-up to 18 Megohm-cm



Efficiency in relation to the micron rating (liquid service)

Table 1

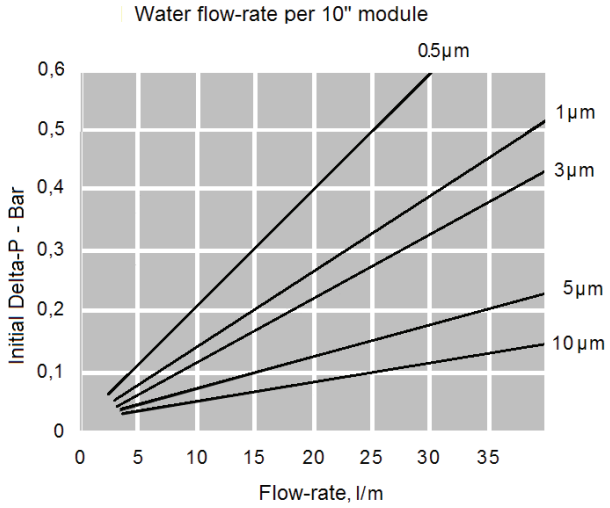
Nominal micron rating	90% retention µm
0.5T	0.5
1T	1
3T	3
5T	5
10T	10
15T	15
25T	25
40T	40
75T	75
100T	100
150T	150

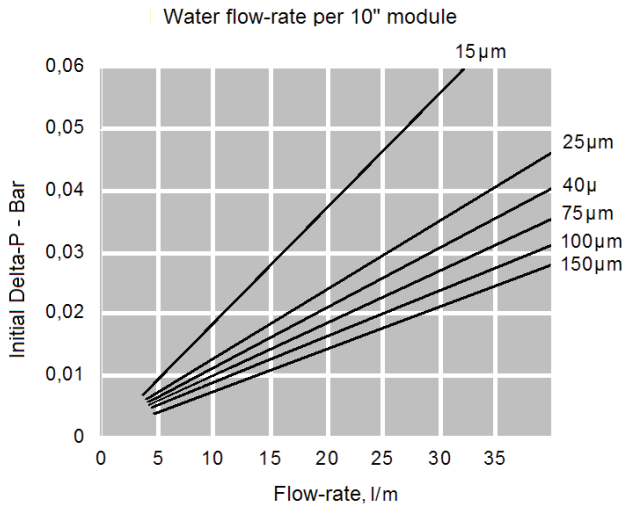
Standard inner core

A strong inner core enables the cartridge to withstand heavy working conditions. Filter media is designed only in function of filtration performance guaranteeing low pressure drop and high dirt capacity.

Proxis – T Polypropylene melt-blown filter elements - nominal series

Flow-rate versus differential pressure





Dimensions:

Nominal lengths:
10", 20", 30", 40", 50"
(254, 508, 762, 1016, 1270 mm)
Outer diameter: 63.5 mm

Working conditions

Max differential pressure:

- 1.00 bar @ 82 °C
- 2.00 bar @ 66 °C
- 4.20 bar @ 24 °C

Changeout Differential Pressure
(Recommended): 2.60 bar.

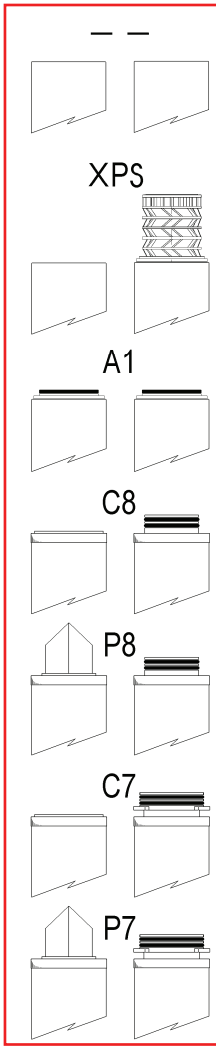
Steam sterilization:

Not recommended

Max temperature with hot water:

59 °C – double open ended versions
82° C – all single open ended versions

Cartridge configuration

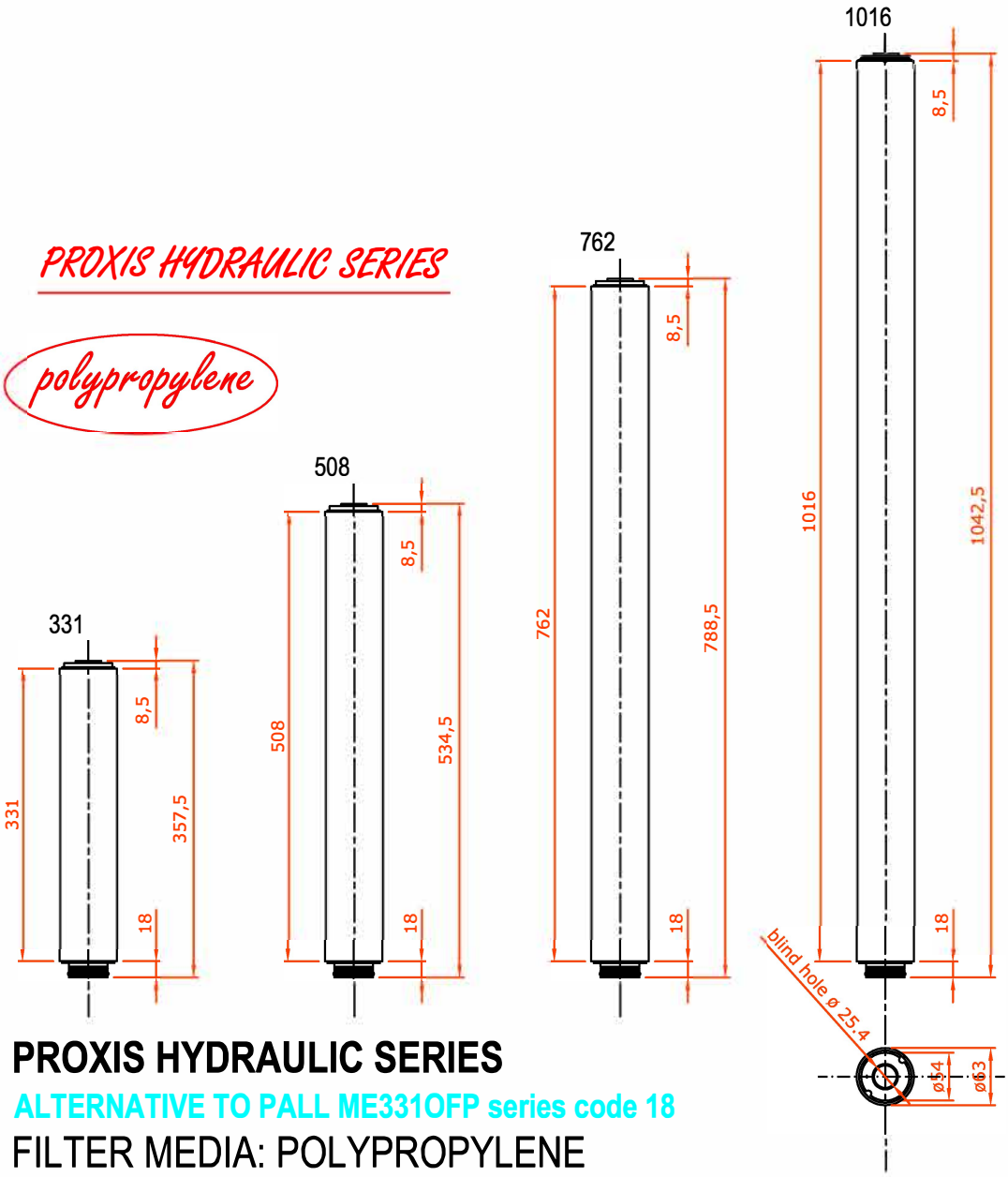


CARTRIDGE CODE SELECTION

Series identification	Micron rating	Outer cage	Cartridge length	End-cap #1	End-cap #2	Gasket material
PRM	Select from Table1	None = X Net = R Cage = G	10" = 1 20" = 2 30" = 3 40" = 4 50" = 5	Cut End = - Open = A Flat = C Spear = P	Cut End = - PP spring = PS Open = 1 O.R. 222 = 8 O.R. 226 = 7	None = - Buna = N Viton = V Silicone = S EPDM = E PTFE = T
PRM	**5T**	**X**	**3**	**C**	**8**	**S**

PROXIS HYDRAULIC SERIES

polypropylene



PROXIS HYDRAULIC SERIES

ALTERNATIVE TO PALL ME331OFP series code 18

FILTER MEDIA: POLYPROPYLENE

INNER CORE MATERIAL: POLYPROPYLENE

END-CAPS MATERIAL: POLYPROPYLENE

CONFIGURATION D8

PRM (¹) AX331D8 (²)

PRM (¹) AX508D8 (²)

PRM (¹) AX762D8 (²)

PRM (¹) AX1016D8 (²)

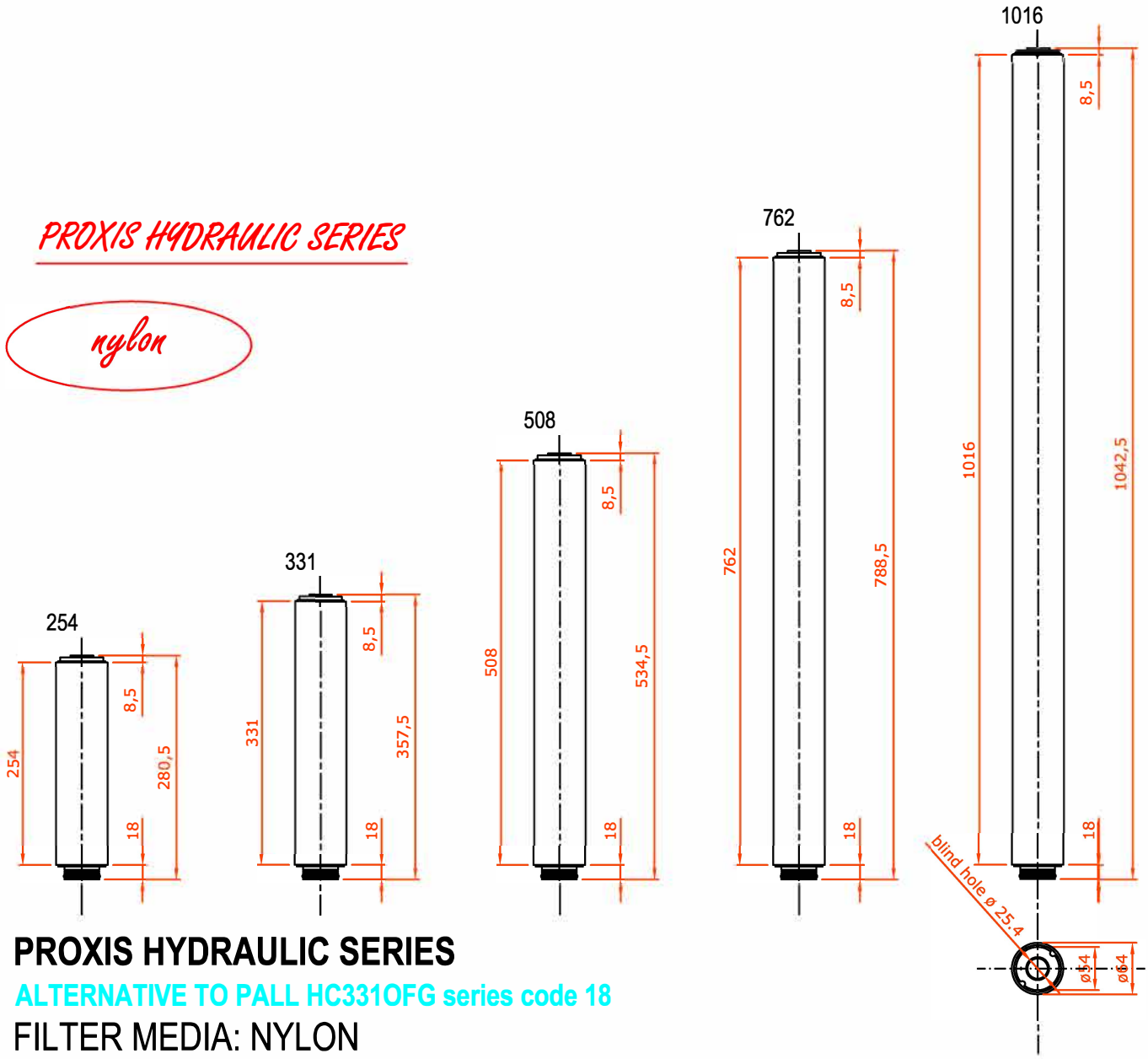
(¹) - retention, available: 1, 3, 6, 12, 20, 40, 70, 90 µm

(²) - O Ring material, available:

EPDM, Viton, PTFE, Silicone encapsulated PTFE

PROXIS HYDRAULIC SERIES

nylon



PROXIS HYDRAULIC SERIES

ALTERNATIVE TO PALL HC331OFG series code 18

FILTER MEDIA: NYLON

INNER CORE MATERIAL: NYLON

END-CAPS MATERIAL: NYLON

CONFIGURATION ND8

PRNN (¹) - 254ND8 (²)

PRNN (¹) - 331ND8 (²)

PRNN (¹) - 508ND8 (²)

PRNN (¹) - 762ND8 (²)

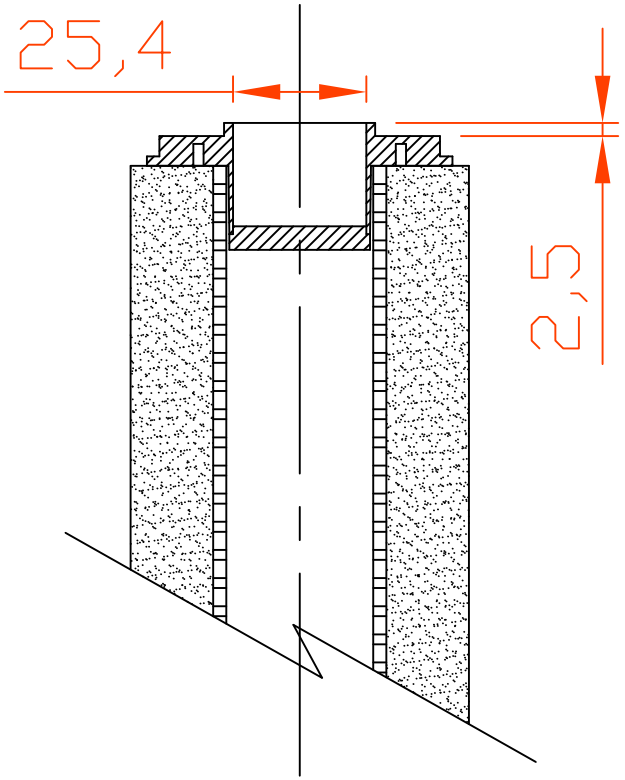
PRM (¹) - 1016ND8 (²)

(¹) - retention, available: 5, 6, 12, 20, 30, 40, 70, 90 µm

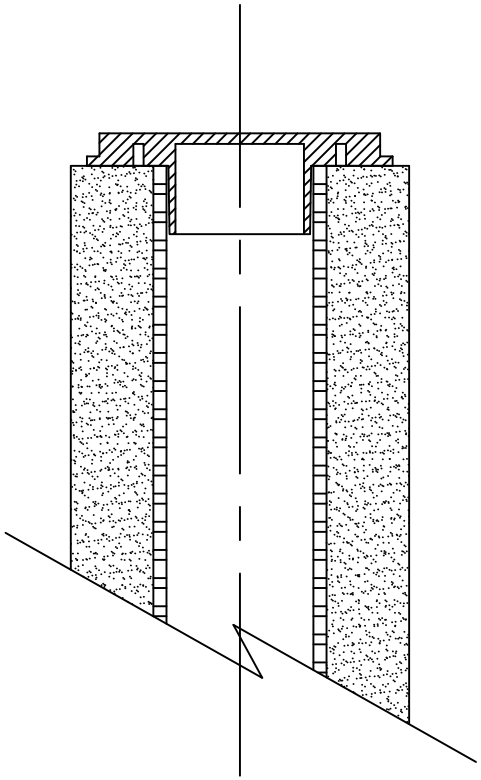
(²) - O Ring material, available:

EPDM, Viton, PTFE, Silicone encapsulated PTFE

Configuration D8/ND8

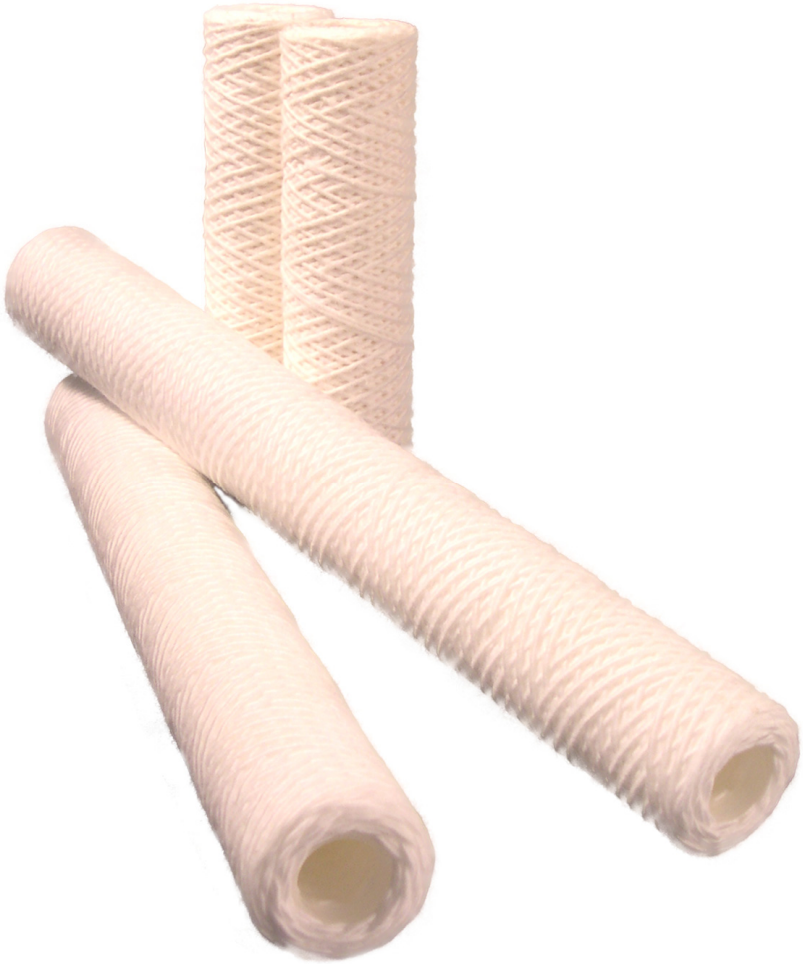


Configuration C8/NC8



StringFine

Wound filter cartridges



StringFine filter elements are the solution provider whenever the application requires a specific chemical compatibility or high temperature resistance.

StringFine range offers a wide choice of filter media to be combined with an equally wide range of inner cores,
thus to satisfy all critical applications.

Benefits:

- graded pore structure
- high contaminant holding capacity
- no binders

CARTRIDGE CODE SELECTION

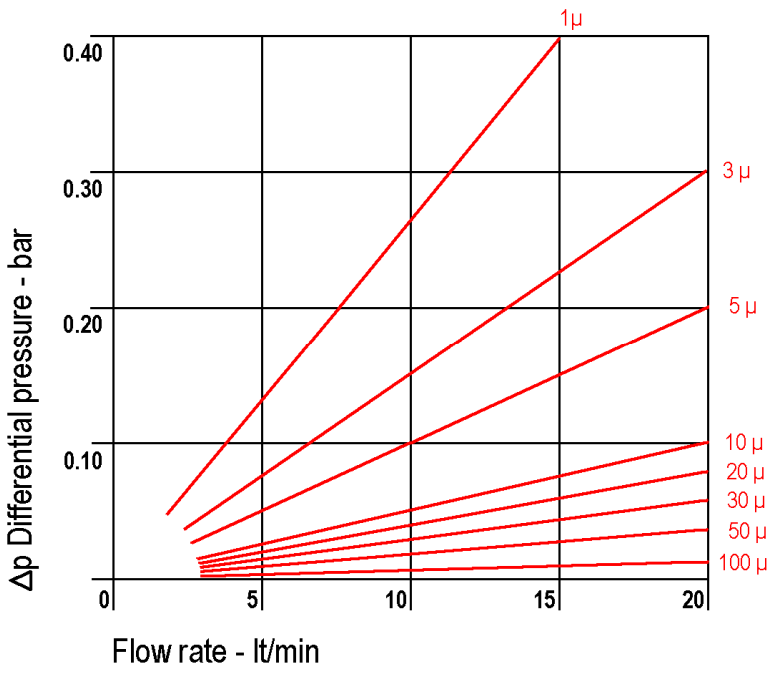
Cartridge length	# Filter media material	Inner core material	# Nominal micron rating	End-cap 1	End-cap 2	Gasket material
4" = 4	Polypropylene = M	Polypropylene = P	1µ = 1	None = -	None = -	None = -
5" = 5	Cotton mix = C	304 ss = X	3µ = 3	Open = A	Open = 1	Buna = N
7" = 7	Pure cotton = W	316 ss = S	5µ = 5	Capped = C	O.R..2-222 = 8	Viton = V
10" = 10	Rayon = V	Galvanized st.: = Z	10µ = 10	Spear = P	O.R..2-226 = 7	Silicone = S
20" = 20	Polyprop.FDA = L		20µ = 20			EPDM = E
30" = 30	Glass fiber = G		30µ = 30			PTFE = T
40" = 40			50µ = 50			
			100µ = 100			
10	**M**	**P**	**20**	**-**	**-**	**-**

StringFine

Chemical compatibility and temperature recommendations

Fluid		Filter media material	Inner core material	Max temperature
ACIDS				
• Nitric acid	25%	polypropylene	polypropylene	80°C
• Nitric acid	70%	glass fibre	stainless steel	400°C
• Hydrochloric acid	30%	polypropylene	polypropylene	80°C
• Sulphuric acid	75%	polypropylene	polypropylene	80°C
• Sulphuric acid	95%	glass fibre	stainless steel (304)	400°C
• Formic acid		glass fibre	stainless steel (316)	400°C
BASES				
• Sodium hydroxide	40%	polypropylene	polypropylene	80°C
• Potassium hydroxide	30%	polypropylene	polypropylene	80°C
CHEMICALS				
• Sodium hypochlorite		polypropylene	polypropylene	80°C
• Peracetic acid		polypropylene	polypropylene	80°C
• Hydrogen peroxide		polypropylene	polypropylene	80°C
• Ethilene oxide		cotton	stainless steel	10°C
SOLVENTS				
• Xylene		cotton	stainless steel	150°C
• Toluol		cotton	stainless steel	150°C
• MEK		cotton	stainless steel	150°C
• Freon		cotton	stainless steel	93°C

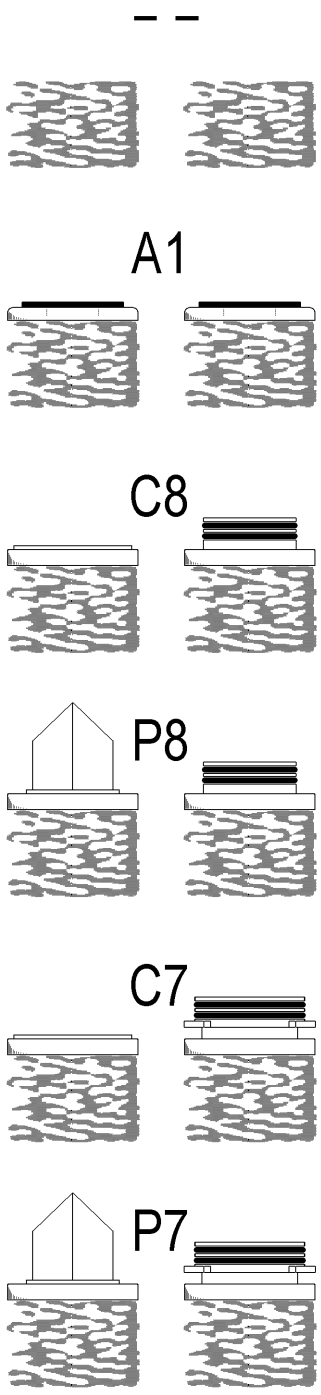
Water flow-rate for a 10” module



Main applications

- Chemical
- Power generation
- Water treatment
- Electroplating
- Solvents

End-Caps configuration



Activated Carbon Filter Cartridges

Codes: CBFA10 (10”) – CBFA20 (20”)

Activated Carbon Block Filter Cartridges for Liquid
- Activated carbon powder with suitable binder prevents by-passes
- DOE configuration
- Available 10” and 20” length

Recommended Maximum Flow Rates: 10” = 5.0 l/min, 20” = 10.0 l/min
Initial Δp: 10” = 0.07 bar at 5 l/min, 20” = 0.08 bar at 10 l/min

Expected Cartridge Capacity for Chlorine 10” = **2**0.000 lt, 20” = 40.000 l

Materials of Construction:
Activated carbon powder with binder
Polypropylene wire outer winding
Coreless element, self supported
Gaskets: Polyethylene

Codes: CB10H (10”) – CB20H (20”)

Activated Carbon Block Filter Cartridges for Liquid
- Activated carbon powder with suitable binder prevents by-passes
- DOE configuration
- Available 10” and 20” length

Recommended Maximum Flow Rates: 10” = 5.0 l/min, 20” = 10.0 l/min
Initial Δp: 10” = 0.07 bar at 5 l/min, 20” = 0.08 bar at 10 l/min

Expected Cartridge Capacity for Chlorine 10” = **2**0.000 lt, 20” = 40.000 lt

Materials of Construction:
Activated carbon powder with binder
Polypropylene end-caps
Coreless element, self supported
Gaskets: Buna N

Codes: CAL10A1 (10” DOE) – CAL20A1 (20” DOE) - CAL10P8 (10” P8) – CAL20P8 (20” P8)

Granular Activated Carbon Filter Cartridges for Liquid
- Contains about 350 gr and 700 gr of granular activated carbon respectively for 10” and 20”
- End-to-End Flow Design Maximizes Carbon Adsorption
- DOE and P8 configurations
- Available 10” and 20” length

Recommended Maximum Flow Rates: 10” = 4.0 l/min, 20” = 4.0 l/min
Initial Δp: 10” = 0.3 bar at 4 l/min, 20” = 0.6 bar at 4 l/min

Expected Cartridge Capacity for Chlorine 10” = 30.000 lt, 20” = 60.000 lt

Materials of Construction:
Granular Activated Carbon
Outer Shell & End Caps: methacrylate
Post Filter: Spun Polyurethane
Gaskets: Buna N

Not suitable for housings provided with tie rod guide

Activated Carbon Filter Cartridges

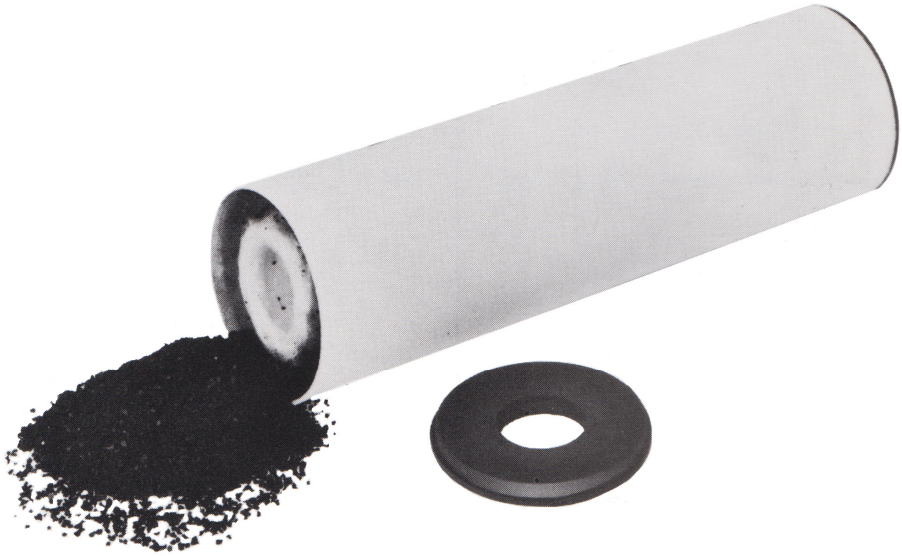
Codes: CAP10H (10”) – CAP20H (20”)

Granular Activated Carbon Filter Cartridges for Liquid & Gas
- Contains about 200 gr and 400 gr of granular activated carbon respectively for 10” and 20”
- DOE configuration
- Available 10” and 20” length

Recommended Maximum Flow Rates: 10” = 6.0 l/min, 20” = 12.0 l/min
Initial Δp: 10” = 0.04 bar at 6 l/min, 20” = 0.05 bar at 12 l/min

Expected Cartridge Capacity for Chlorine 10” = 17.000 lt, 20” = 34.000 lt

Materials of Construction:
Granular Activated Carbon
Porous, Polyethylene Outer Shell, Polypropylene End-caps & Inner core
Post Filter: Polypropylene
Gaskets: Buna N



HPV

Resin Bonded Series
Filter Cartridges

HPV *cartridges use wound resin-impregnated fibers that are 100-to-150 millimeters in length, much longer than typical molded cartridges, which use fibers of about 3 millimeters. As a result, very few fibers migrate downstream into the process stream. This prevents equipment damage and the need to recirculate before filtering to clean up filter debris.*

HPV *are not approved for food & beverages*

Features

- Designed for highly viscous fluids
- Reliable, consistent filtration
- Negligible media migration
- One piece construction
- High contaminant-holding capacity
- Very high flow rates
- No center core allows for easy disposal
- Exceptional, economical particle classifier for pigmented coatings

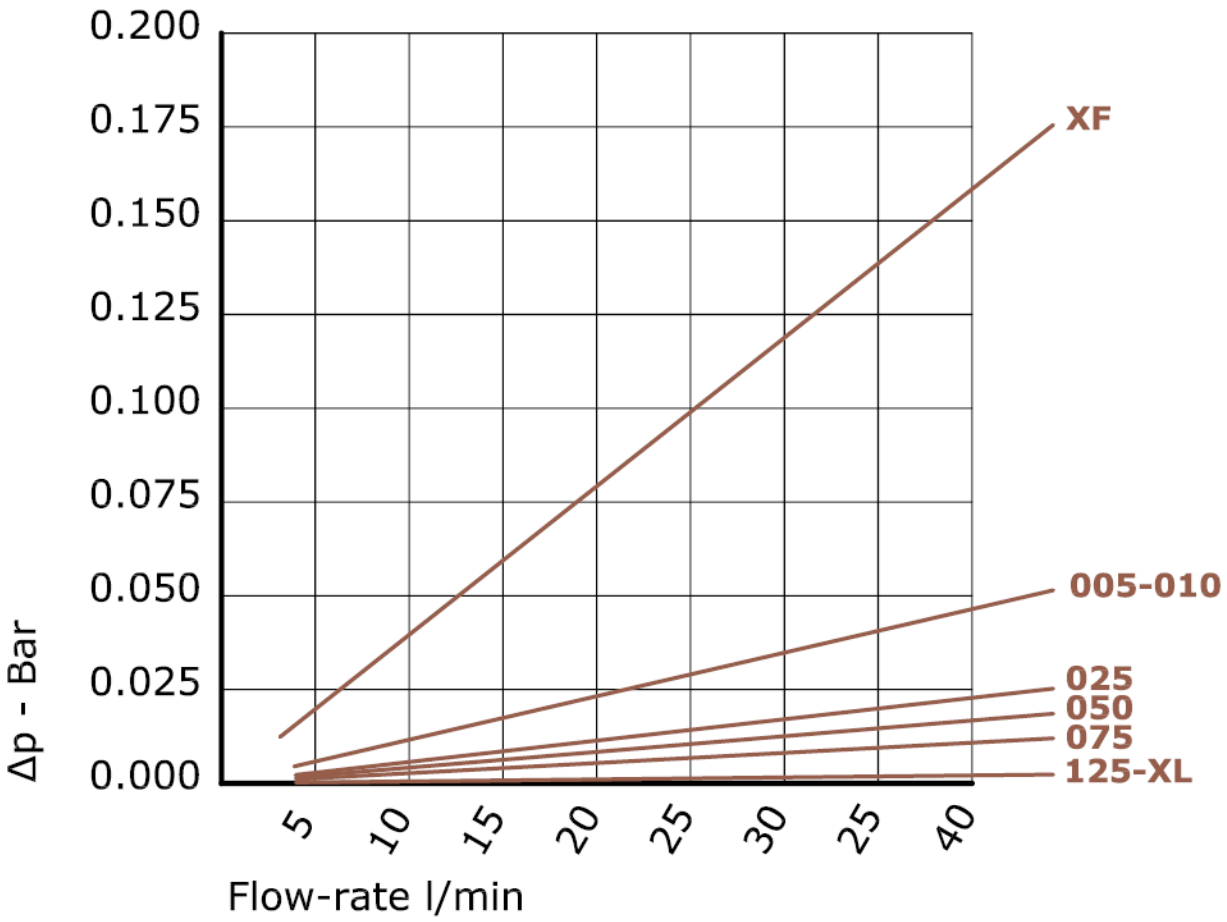
Typical Applications

- Adhesive emulsions
- Enamels
- Box inks
- Laquers
- Paints
- Sealants
- Machine coolants
- Crude oils
- Fuel oils
- Solvents
- Grease
- Hydraulic fluids
- Waxes
- Antifreeze
- Animal oils
- Plasticizers
- Rapeseeds oils
- Turpentine

CARTRIDGE CODE SELECTION

Series identification	# Nominal micron retention	Inner core	# Cartridge length (mm / inch)	Cartridge Configuration	Available O-rings P8 & C8 only
HPV	1 µm = **-XF** 5 µm = **005** 10 µm = **010** 25 µm = **025** 50 µm = **050** 75 µm = **075** 125 µm = **125** 150 µm = **-XL**	none	248 mm = **9¾"** code **0975** 254 mm = **10"** code **1000** 495 mm = **19½"** code **1950** 508 mm = **20"** code **2000** 743 mm = **29¼"** code **2925** 762 mm = **30"** code **3000** 991 mm = **39"** code **3900** 1016 mm = **40"** code **4000**	cut end, **no symbol** OR222 / finned = **P8** OR222 / flat = **C8** Center. Exten. = **EC**	Viton = **V** EPDM = **E**
HPV	**025**	**-**	**0975**		

HPV - Δp in relation to water flow-rate per 9¾"or 10" module*



(*) – NOTE: **The chart provides the differential pressure value in relation to water flow rate, since the pressure drop is directly proportional to the viscosity of the fluid handled, it is necessary to multiply the value found for the viscosity of the filtered liquid. The differential pressure in operation will therefore be "n" times the one obtained for the water**

Product specifications

Materials of construction: Phenolic resin-impregnated wound polyester fibers
Outside diameter: 2½" (63 mm)
Inside diameter: 1" (25 mm)
Available configurations:

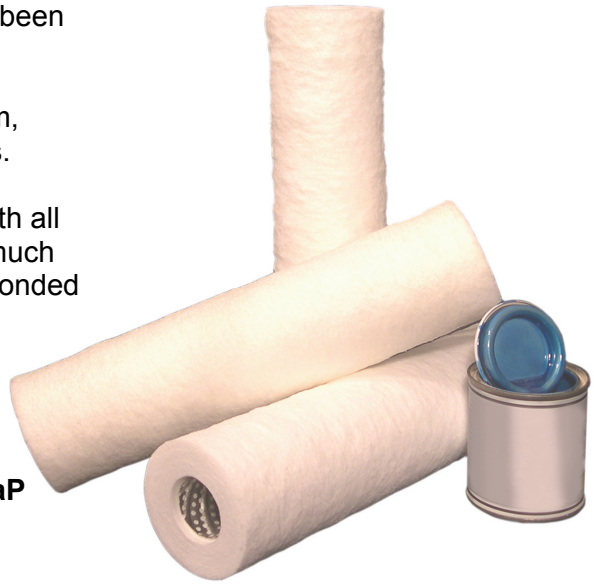
- DOE "cut end", (**no symbol**)
- Centering extension (**EC**)
- 2-222 O-Ring + capped finned (**P8**)
- 2-222 O-Ring + capped flat (**C8**)

Temperature: Max working temperature: 80°C (liquids), 150°C (dry gases)

Proxis Nylon

Nylon melt-blown filter elements

Proxis Nylon melt-blown cartridge elements have been specifically designed to operate in the chemical processing and liquid coatings industries. Manufactured by a unique fibre processing system, it offers superior quality in heavy duty applications.



In terms of performance, Proxis Nylon is in line with all products made from melt-blown microfibres and much better than conventional string-wound and resin bonded filter cartridges.

- no binders
- structure stability
- negligible fibre release
- no contaminant downloading, with high DeltaP
- high consistency
- great contaminant holding capacity

In addition to those properties, Proxis Nylon offers all benefits that are typical of the Nylon polymer which is successful when polypropylene fails.

- good temperature strength
- full chemical compatibility with organic solvents
- good mechanical strength

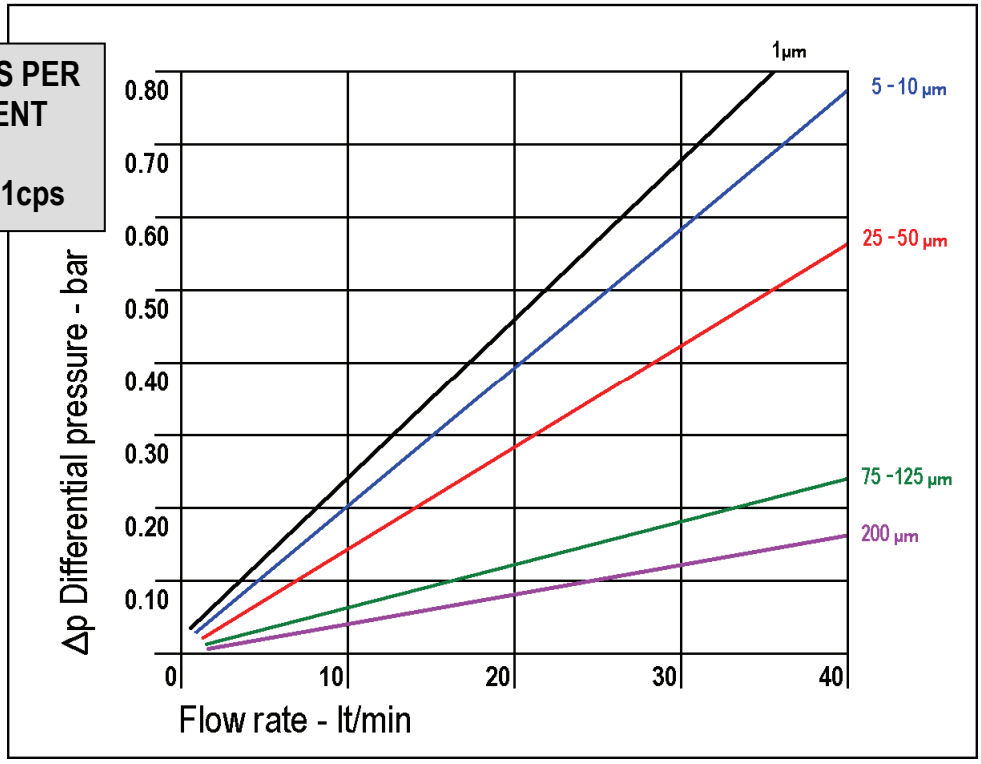
CARTRIDGE CODE SELECTION

PR	N	Z	025	20	-	-

Type	Media	Core	Micron(*) Retention	Length	Cartridge Configuration	Gaskets
PR= Proxis	N=Nylon	Z = Tinned Steel	001 = 1µm	09 = 251 mm	- = Cut end	- = None
		N = Nylon	005 = 5µm	10 = 254 mm	NA1 = DOE	V = Viton
		T = 316 St.Steel	010 = 10µm	19 = 495 mm	NC8 = 222+FLT	E = EPDM
			025 = 25µm	20 = 508 mm	NP8 = 222+FIN	B = Buna
			050 = 50µm	29 = 743 mm	NC7 = 226+FLT	S = Silicone
			075 = 75µm	30 = 762 mm	NP7 = 226+FIN	
			100 = 100µm	39 = 990 mm		
			125 = 125µm	40 = 1016 mm		
			200 = 200µm			

All data correct at time of going to press. Framech eserves the right to modify data without prior notice
(*) – Nominal 99% - Beta ratio = 100

FLOW RATES PER 10" ELEMENT FLUID VISCOSITY 1cps



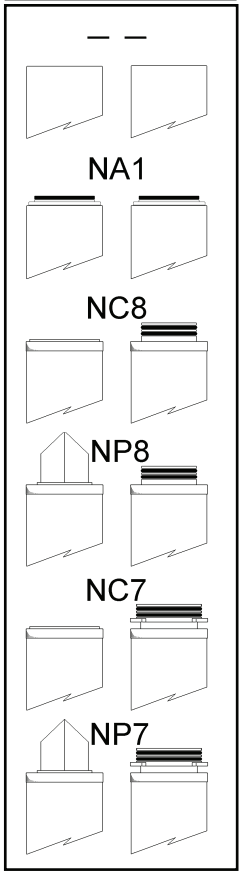
Applications

Fine Chemicals	- Solvent Trap-Filters
Coatings	- Solvent and Lacquers, Waxes, Inks
Petrochemicals	- Amine streams, Glycol solutions, Kerosene, Paraffine, Wax based materials
General Engineering	- Solvent wash systems

Technical features

Filter Media:	- Nylon melt-blown
Inner core:	- 316 Stainless Steel - Nylon - Tin plated steel
Available lengths:	- 9 ¾" – 10" – 19 ½" - 20" – 29 ¼" – 30" – 39" – 40"
Outer Diameter:	- 64 mm
Inner Diameter:	- 28 mm

Cartridge configuration



Maximum operating conditions

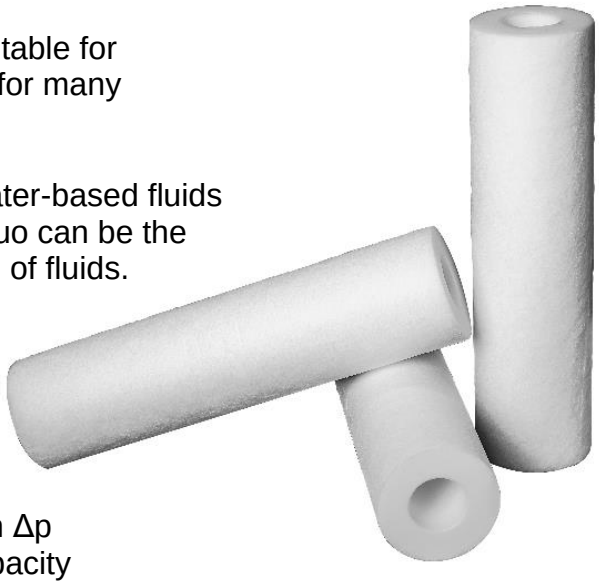
		Steel core	Nylon core
Recommended Δp	@ 20° C	4.0 bar	4.0 bar
Max. ΔP	@ 50° C	4,0 bar	3,0 bar
	@ 80° C	4,0 bar	1,0 bar
	@ 150° C	4,0 bar	0,5 bar

Proxis Duo

Bi-component Polypropylene/Polyethylene filter elements

Proxis Duo filter cartridges take advantage of a tri-dimensional rigid structure that offers an excellent chemical compatibility together with high flow rates also with high viscosity fluids.
The high purity of the polymers makes it suitable for food and beverage applications, as well as for many industrial applications.

Due to the satisfactory compatibility with water-based fluids as well as with industrial solvents, Proxis Duo can be the unique solution for users handling both kind of fluids.



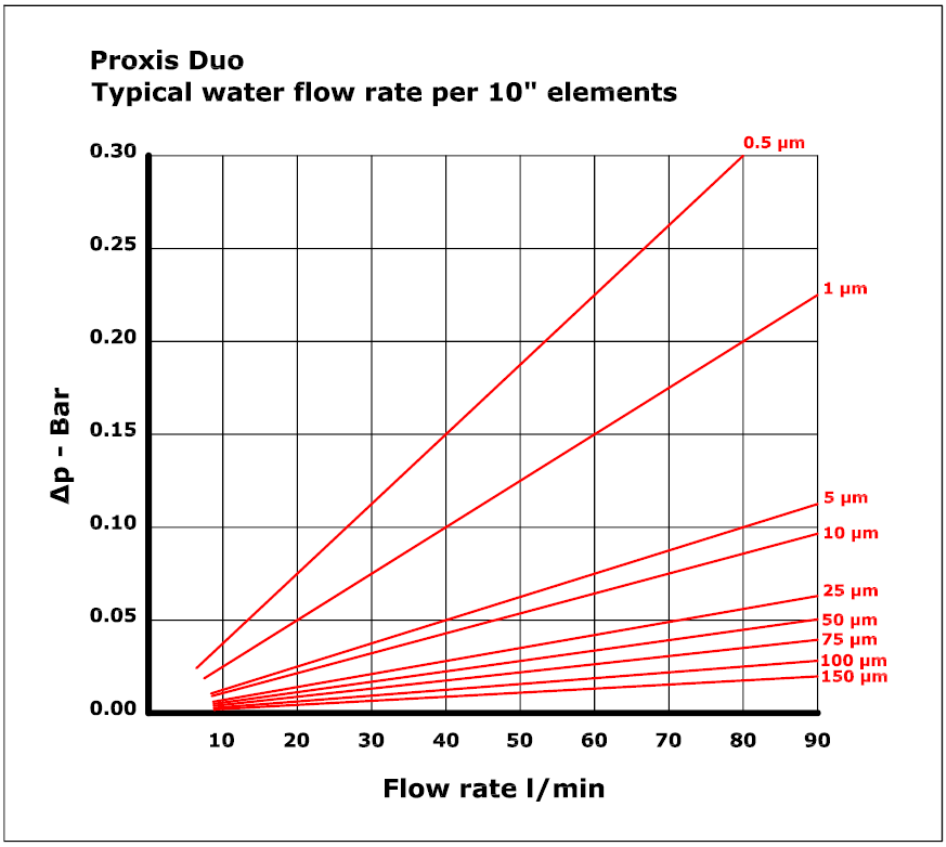
Benefits

- no binders
- 3D rigid structure, no need of inner core
- virtually no fibre release
- no contaminant downloading, even at high Δp
- large void volume so great dirt holding capacity

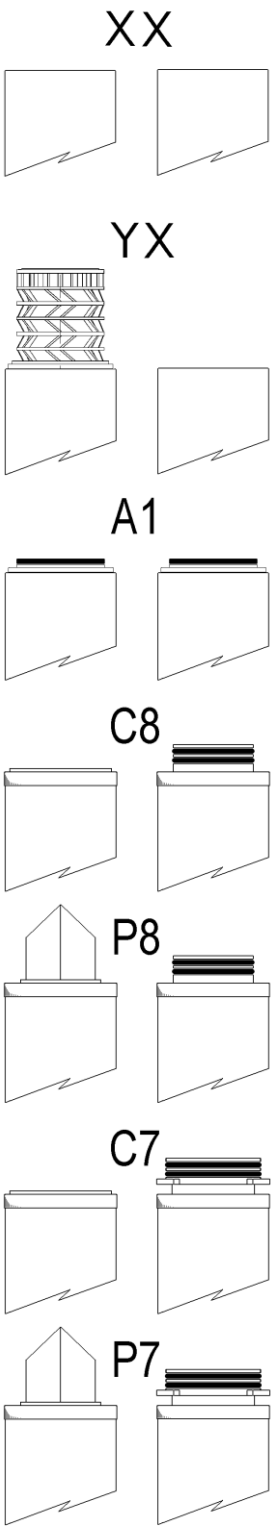
CARTRIDGE CODE SELECTION

Series identification	Nominal retention	Outer cage	Cartridge length	End-cap #1	End-cap #2	Gasket material
PRD	0.5 µm = 0.5T 1 µm = 001T 5 µm = 005T 10 µm = 010T 25 µm = 025T 50 µm = 050T 75 µm = 075T 100 µm = 100T 150 µm = 150T	None = X Net = R Cage = G	(in) (mm) 9¾" = 248 = 09 10" = 254 = 10 19½" = 495 = 19 20" = 508 = 20 29¼" = 743 = 29 30" = 762 = 30 39" = 991 = 39 40" = 1016 = 40	Cut End = - Open = A Flat = C Spear = P PPspring = Y	Cut End = - Open = 1 O.R. 222 = 8 O.R. 226 = 7	None = - Buna = N Viton = V Silicone = S EPDM = E PTFE = T
PRD	025T	X	09	-	-	-

All data correct at time of going to press. Framech reserves the right to modify data without prior notice (*) – Nominal 99% - Beta ratio = 100



Cartridge configurations



TECHNICAL FEATURES

Filter Media:	Polypropylene/Polyethylene
Inner core:	Coreless cartridge
Standard lengths:	9 ¾“– 10”– 19 ½”- 20”
	29 ¼“– 30” – 39” – 40”
Special lengths:	Any length, max 1270 mm
Outer Diameter:	62÷64 mm
Inner Diameter:	30 mm
Collapsing pressure:	4.8 bar at 25°C

Working temperature

- Configurations C8,P8,C7,P7: max 75°C
- Configurations XX,YX,A1: max 45°C

Proxis HF

Large diameter PP melt-blown filter elements

Proxis HF are designed to perform a depth filtration handling a high flow-rate.
The “double density ” of the media offers a two stage structure where pre-filter and final filter are combined in a single unit.
The large internal diameter guarantees a minimum differential pressure, the consequent benefit is a limited number of elements for large flow-rates.
As a further benefit the filter housing will be smaller and smaller the capital investment.
Proxis HF are “coreless” filter elements, mechanical strength is in fact provided by an internal perforated tube as part of the original equipment, that will never be replaced.

BENEFITS

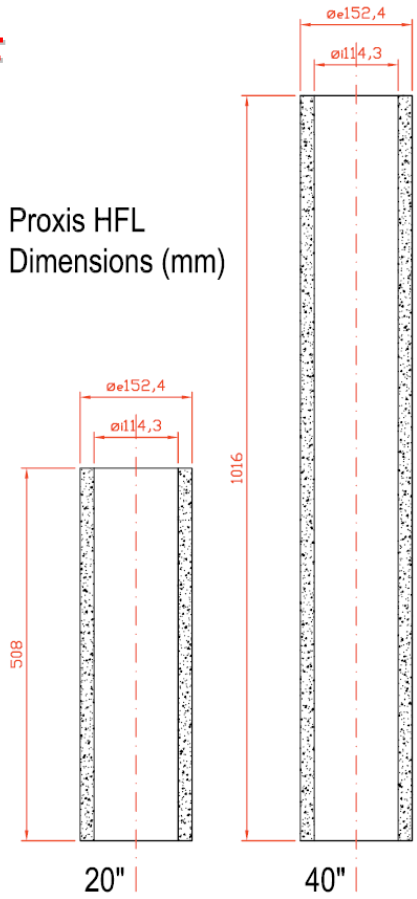
- High flow-rate
- Minimum disposal cost
- One single material: polypropylene
- Wide chemical compatibility
- No binders or resins
- High dirt capacity
- Double density filter media
- Practically no fiber release
- Negligible contaminant downloading
- Two standard lengths, and five micron ratings

CARTRIDGE CODE SELECTION

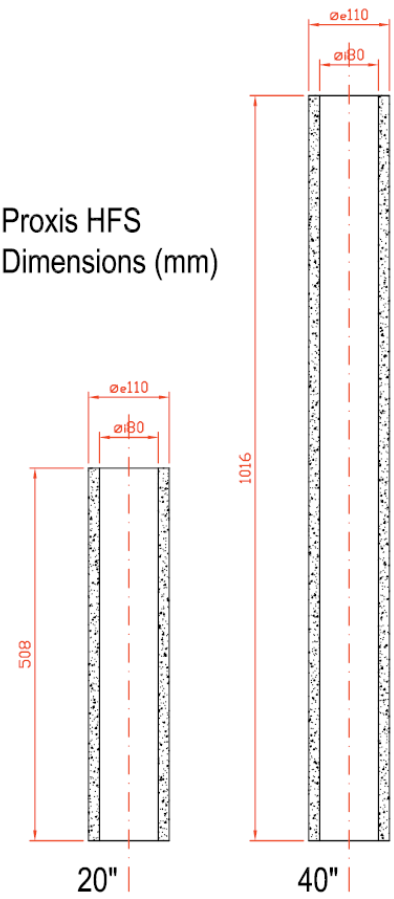
Series identification	# Nominal Micron rating	Inner core	# Cartridge lenghth	End-cap 1	End-cap 2	Gasket material
HFL Øe 152.4 Øi 114.3 **HFS** Øe 110 Øi 80	1 µm = **001** 5 µm = **005** 10 µm = **010** 20 µm = **020** 40 µm = **040**	None	20” = **2** 40” = **4**	None	None	None
HFL	**020**	**-**	**4**			

Proxis HF

Proxis HFL
Dimensions (mm)



Proxis HFS
Dimensions (mm)



Filter area
HFL…- 2 = 0,24 m²
HFL…- 4 = 0,48 m²
HFS…- 2 = 0,17 m²
HFS…- 4 = 0.35 m²

MAIN FEATURES AND WORKING CONDITIONS

Available micron ratings
1, 5, 10, 20, 50, µm

Working conditions

Max differential pressure:	4,2 bar a 20 °C
Max temperature:	60 °C

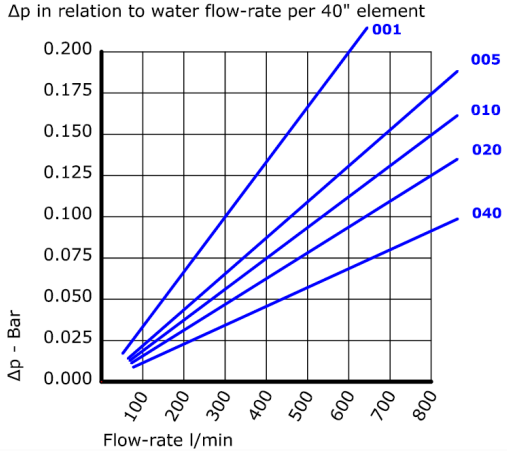
Materials

Filter media:	Polypropylene
End-caps:	No end-caps
Gaskets:	No gaskets

Note:
Materials in accordance with
NSF42/ FDA CFR Title 21

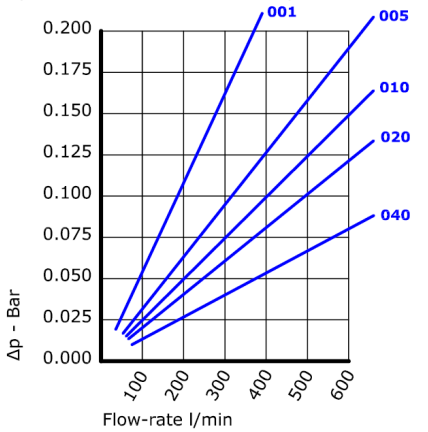
Proxis HFL

Δp in relation to water flow-rate per 40" element



Proxis HFS

Δp in relation to water flow-rate per 40" element



Water flow-rate of a 40” element versus differential pressure, a 20” element offers half of the flow-rate with same differential pressure

HIGH-FLO

Pleated filter elements

Main applications

- Chemical and petrochemical
- Liquid and gas fuel
- Water injection – oil wells
- Power generation
- Pre RO, can fit housings designed for standard RO membranes

FEATURES

Available filter media - polypropylene
- polyester
- borosilicate

Outer cage & inner core
- polypropylene

Micron retention
- 0.6, 1, 3, 5, 8, 15, 30, 60, 50, 80 µm

Standard lengths
- 20” – 40” – 60” – 80”

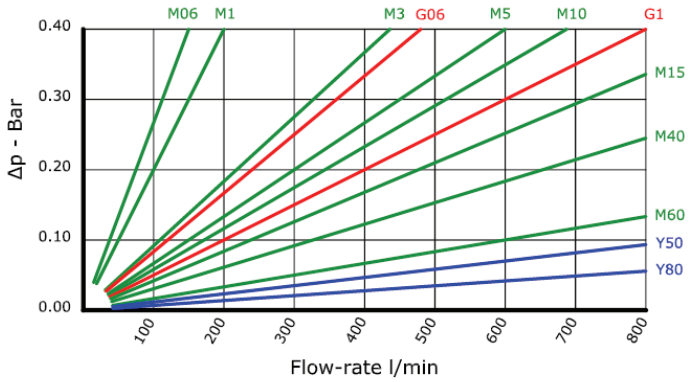
CARTRIDGE CODE SELECTION

Series identification	Filter media and Micron retention	Standard length	Gasket material
SPL	Please select from Table 1	20” = L2 40” = L4 60” = L6 80” = L8	Buna = N Viton = V Silicone = S EPDM = E
SPL	M15	L6	E

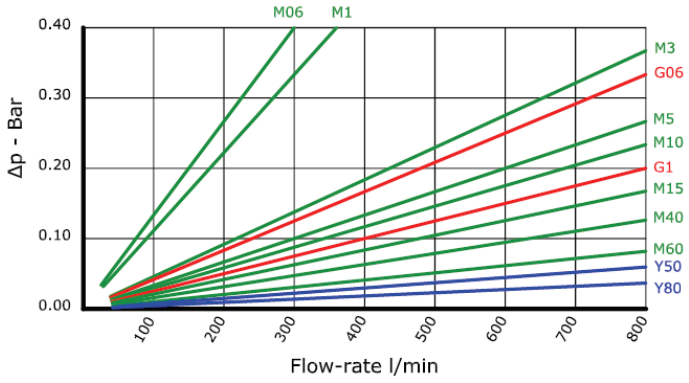
Table 1 - Standard filter media		Particle removal in liquid		
Filter media code	Filter media material	Nominal ß = 10	Nominal ß = 100	Absolute ß = 1000
Y80	polyester	55*	68*	80*
Y50	polyester	25	35	50
M60	polypropylene	30	40	60
M40	polypropylene	17	25	40
M15	polypropylene	5	12	15
M10	polypropylene	4	7	10
M5	polypropylene	1	3	5
M3	polypropylene	0.6*	1.5*	3
M1	polypropylene	0.45*	0.8*	1*
M06	polypropylene	0.2*	0.4*	0.6*
G1	borosilicate	0.45*	0.8*	1*
G06	borosilicate	0.2*	0.4*	0.6*

* - Extrpolated value

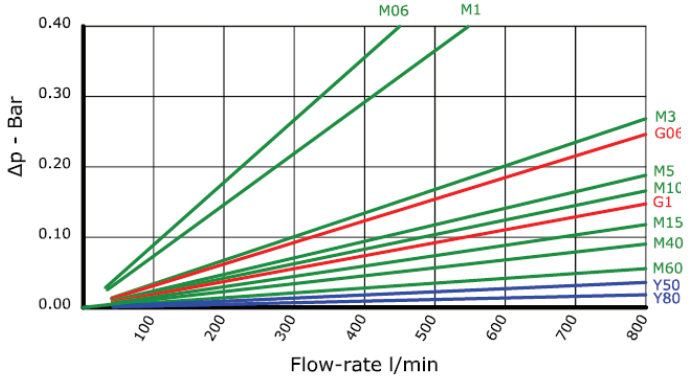
HIGH-FLO water flow-rate graph size L2 (length 20")



HIGH-FLO water flow-rate graph size L4 (length 40")



HIGH-FLO water flow-rate graph size L6 (length 60")



HIGH-FLO

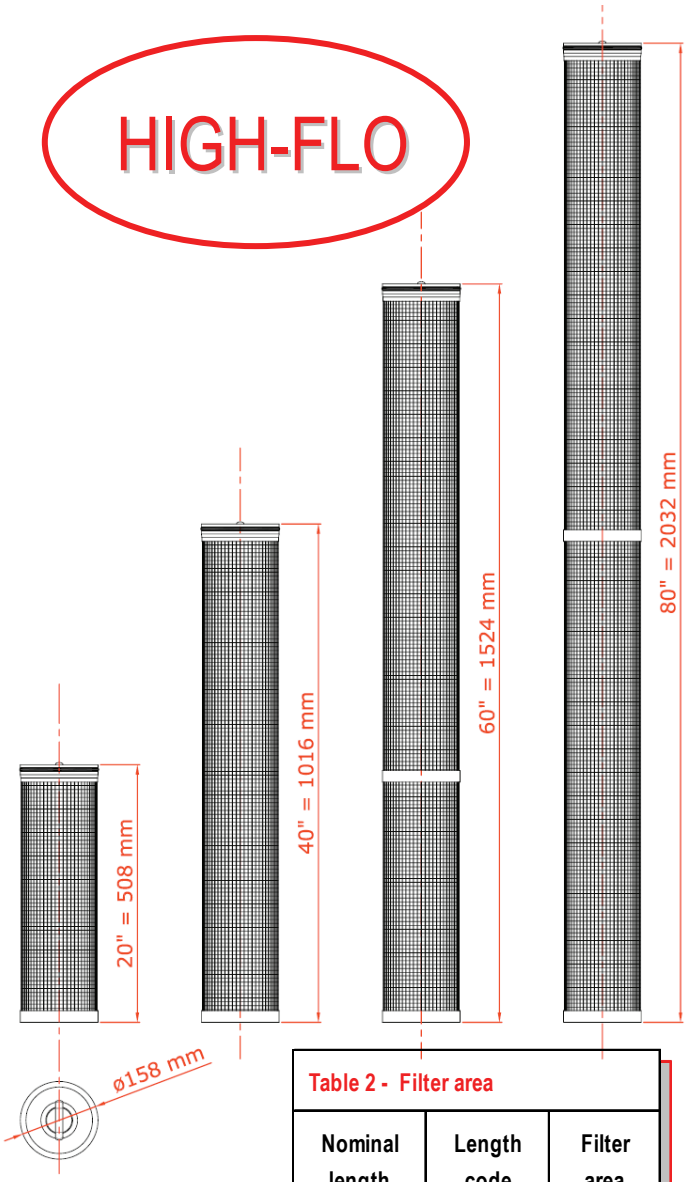
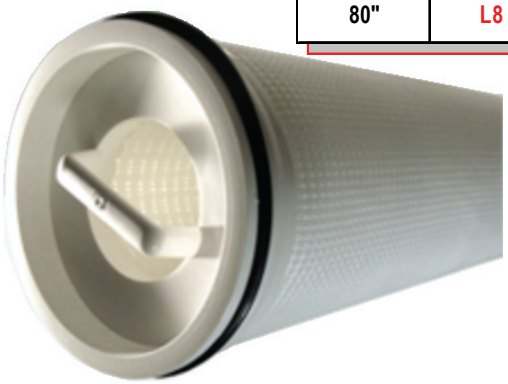


Table 2 - Filter area		
Nominal length	Length code	Filter area
20"	L2	3 m²
40"	L4	6 m²
60"	L6	9 m²
80"	L8	12 m²



All data correct at the time of going to press.
Framech reserves the right to modify data without prior notice

MultiFine MS

Pleated filter elements to fit bag filter housings

MultiFine MS, is designed to offer long life whenever the filter area of conventional filter bags is not sufficient to cover the entire batch.
MultiFine MS, will fit practically all bag filter housings taking advantage of the existing structure with no other change than the filter element itself.
It offers about 10 times the area of a conventional Size 2 bag to guarantee very low differential pressure, high dirt capacity and quick maintenance operations.
The large internal diameter allows to handle the flow-rate with no restriction of the section.

Main features

- Multi-layer pleated filter media with drainage netting for a full distribution of the flow trough out the element
- Outer cage to prevent damage during the handling and to provide a mechanical support for the differential pressure
- Cartridge structure and the majority of the filter media are made from polypropylene, all materials are approved in contact with edible fluids

Standard sizes:

- **1** = to fit single bag filter housings size 1
- **2** = to fit single and multi-bag filter housings size 2

Filter media

- Polypropylene, wide chemical compatibility
- Borosilicate, naturally charged (“Z” potential) to remove organic matter
- Polyester, hydrophilic and very good with solvents

CARTRIDGE CODE SELECTION

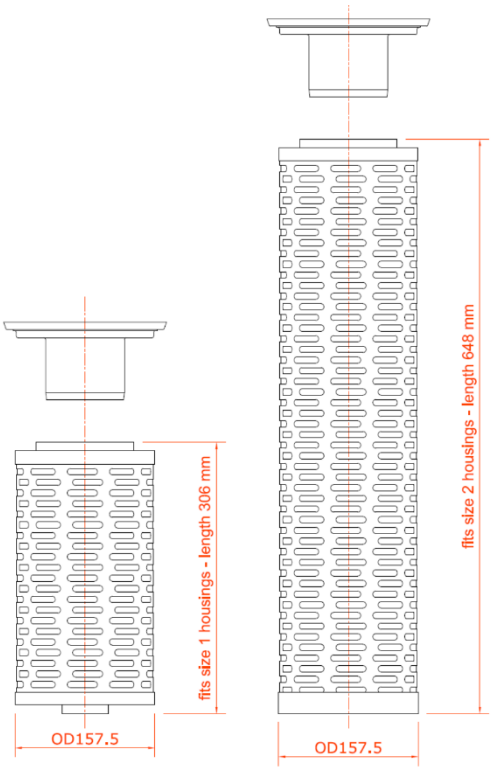
Cartridge series	Filter media material and micron rating	Standard sizes	End-caps configuration	Outer cage	Standard Gasket material
MultiFine = **MU**	To be selected from Table1	To fit Size 1 housings = **MS1** To fit Size 2 housings = **MS2**	Standard = **A**	Molded = **K** Extruded = **Z**	Silicone FEP = **Q**
MU	**M010**	**-MS2**	**-A**	**K**	**-Q**

MultiFine

Table 1 - Standard filter media

Filter media code	Filter media material	Nominal filter area MS1	Nominal filter area MS2	Particle retention in liquids Nominal ß = 10	Nominal ß = 100	Absolute ß = 1000
Y080	polyester	2.00 m²	4.10 m²	55*	80*	-
Y050	polyester	2.00 m²	4.10 m²	25	50*	-
Y005	polyester	2.00 m²	4.10 m²	3	5	-
M080	polypropylene	2.00 m²	4.10 m²	50*	80*	-
M050	polypropylene	2.00 m²	4.10 m²	30	50*	-
M020	polypropylene	2.00 m²	4.10 m²	10	15	20
M010	polypropylene	2.00 m²	4.10 m²	3	5	10
M005	polypropylene	2.00 m²	4.10 m²	1	3	5
M003	polypropylene	2.00 m²	4.10 m²	0.6*	1.5*	3
M001	polypropylene	2.00 m²	4.10 m²	0.45*	0.8*	1*
M0.6	polypropylene	2.00 m²	4.10 m²	0.2*	0.4*	0.6*
G001	borosilicate	2.00 m²	4.10 m²	0.45*	0.8*	1*
G0.6	borosilicate	2.00 m²	4.10 m²	0.2*	0.4*	0.6*

* - extrapolated value



Definition of "Beta ratio"

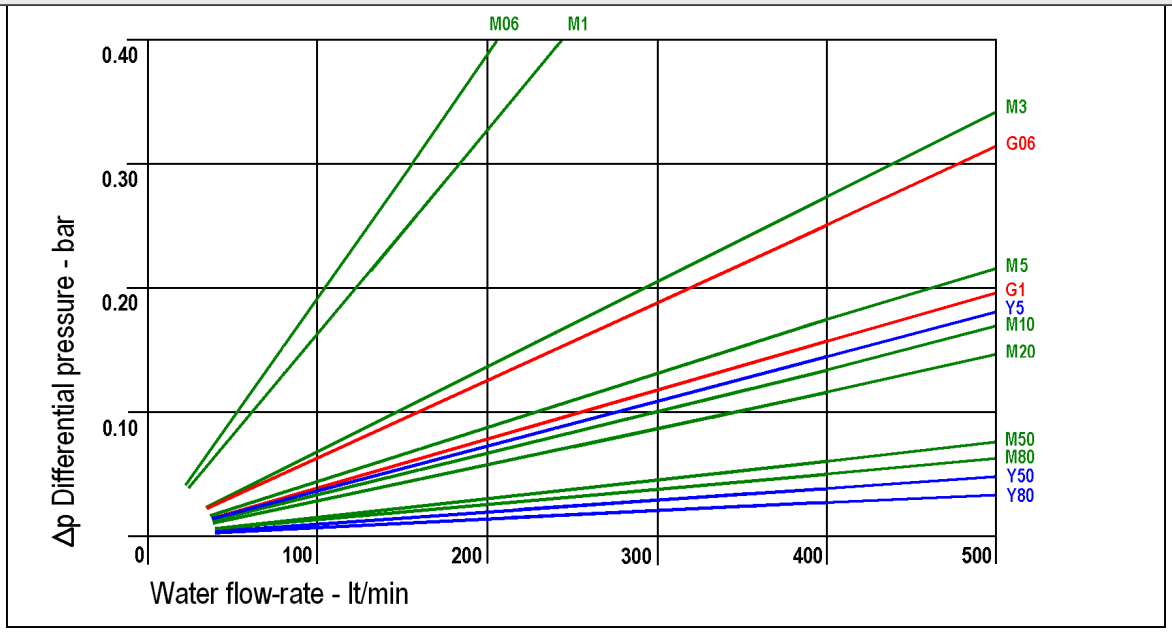
The value of "ß" for a given particle size (**x**) is the result of the following ratio:

$$ß(x) = \frac{\text{n° of particles with size } >x \text{ up-stream}}{\text{n° of particles with size } >x \text{ down-stream}}$$

The relation between Beta ratio and efficiency, is as follows:

$$Eff.\% = \left(1 - \frac{1}{ß}\right) 100$$

Water flow-rate versus differential pressure of a MS1 filter element, MS2 filter elements will offer twice as much the flow-rate at same differential pressure



StarMesh

Metallic filter elements

StarMesh filter cartridges are provided with a stainless steel wire mesh filter media available in several micron ratings always with the same pore size accuracy. StarMesh can stand heavy working conditions as well as strong cleaning procedures such as backwash or treatments with strong chemicals. Once removed from the housing, one can clean them in an ultrasonic bath, or simply brushing the surface of the wire mesh or by means of a high-pressure jet of water.

The low pressure loss generated in line, make them suitable for liquids with high viscosity. Stainless steel has a good chemical compatibility with organic solvents and in many versions can accept high temperature; some of the typical StarMesh applications are paint, varnish, and resin filtration; but you can find them also in food & beverage applications.

Versions
- **PL** - Pleated
- **NP** - Non pleated

Wire mesh material
- **W** - 304 ss
- **S** - 316 ss

End-cap material/joint
- **E** – Epoxy resin with stainless steel end-caps
- **G** – Rolled stainless steel end-caps
- **T -** Tin joint with stainless steel end-caps
- **M –** Polypropylene joint with polypropylene end-caps
- **S –** Integrally welded with stainless steel end-caps

Nominal lengths
- 10” – 20” – 30” – 40”

Cartridge configurations
- **A1** – Double open ended - flat gaskets
- **C8** – OR 2-222 + capped - flat
- **P8** – OR 2-222 + capped - spear
- **C7** – OR 2-226 & bayonet + capped - flat
- **P7** – OR 2-226 & bayonet + capped - spear

CARTRIDGE CODE SELECTION

Cartridge version	# **Wire Mesh material**	**Micron rating**	**End-cap joint**	# **Nominal length**	**Cartridge configuration**	**Gasket material**
Pleated = **PL** Non pleated = **NP**	304ss = **W** 316ss = **S**	absolute: **10A** **25A** nominal: **25 100 300** **40 150 400** **70 250 750**	Epoxy = **E** Pressed = **G** Tin = **T** Polypropylene = **M** Welded = **S**	10” = **1** 20” = **2** 30” = **3** 40” = **4**	DOE = **A1** OR222/flat = **C8** OR222/spear = **P8** OR226/flat = **C7** OR226/spear = **P7** #	Buna = **N** Viton = **V** Silicone = **S** EPDM = **E** PTFE = **T**
PL	**W**	**150**	**E**	**1**	**A1**	**-**

StarMesh

Table1 - Max working temperature

Cartridge version				
Epoxy	Pressed	Tin joint	Polypropylene	Welded
130°C	300°C	190°C	80°C	400°C

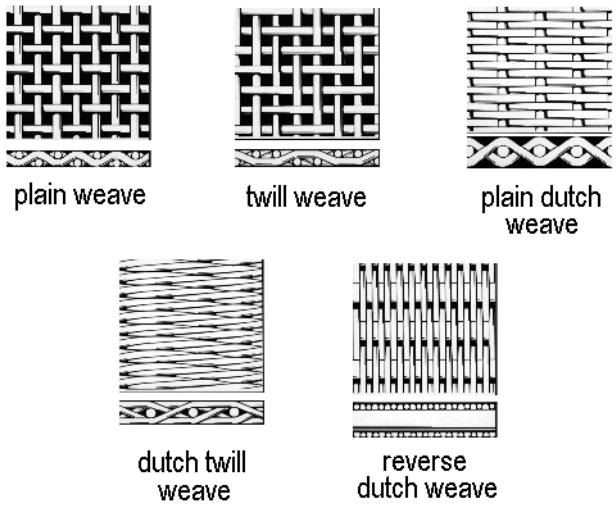
Main applications

- Aqueous liquids
- Non-aqueous liquids
- Organic & inorganic solvents
- Paint & varnish
- Water treatment – first stage
- Hot fluids
- Chemicals compatible with stainless steel
- Lubricants & mineral oil
- Glucose and saccarose solutions

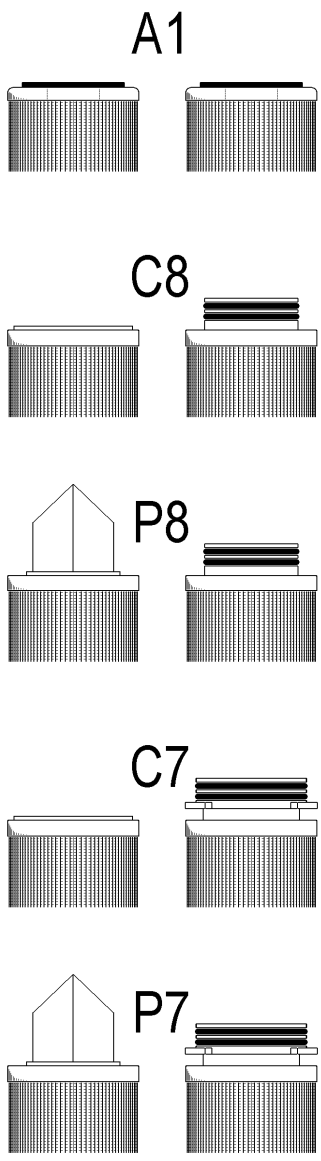
Benefits

- Re-usable
- Temperature resistant
- Strong structure - can stand high differential pressure
- Very low initial pressure loss
- No fibre release
- Negligible contaminant downloading
- Good chemical compatibility
- Back-washable
- Ultrasonic cleaning
- Wide range of micron ratings

StarMesh
Typical wire mesh filter media available



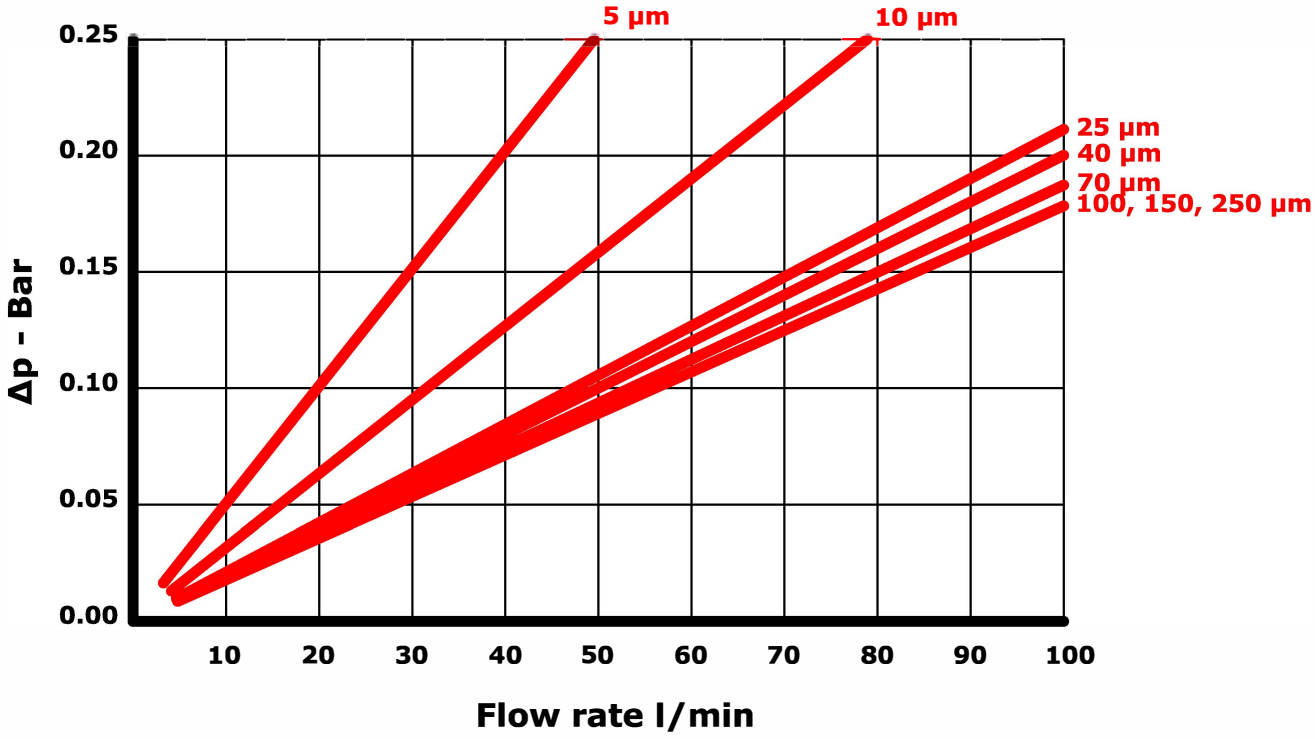
Standard configurations



All data correct at time of going to press.
Framech reserves the right to modify data without prior notice

Laboratory service: 14/03/2015

StarMesh PLW/PLS
Typical water flow rate per 10" elements*



(*) - Flow rate for longer filter elements does not show significant variations, the impact of the larger filter area is mainly evident for the extended service life

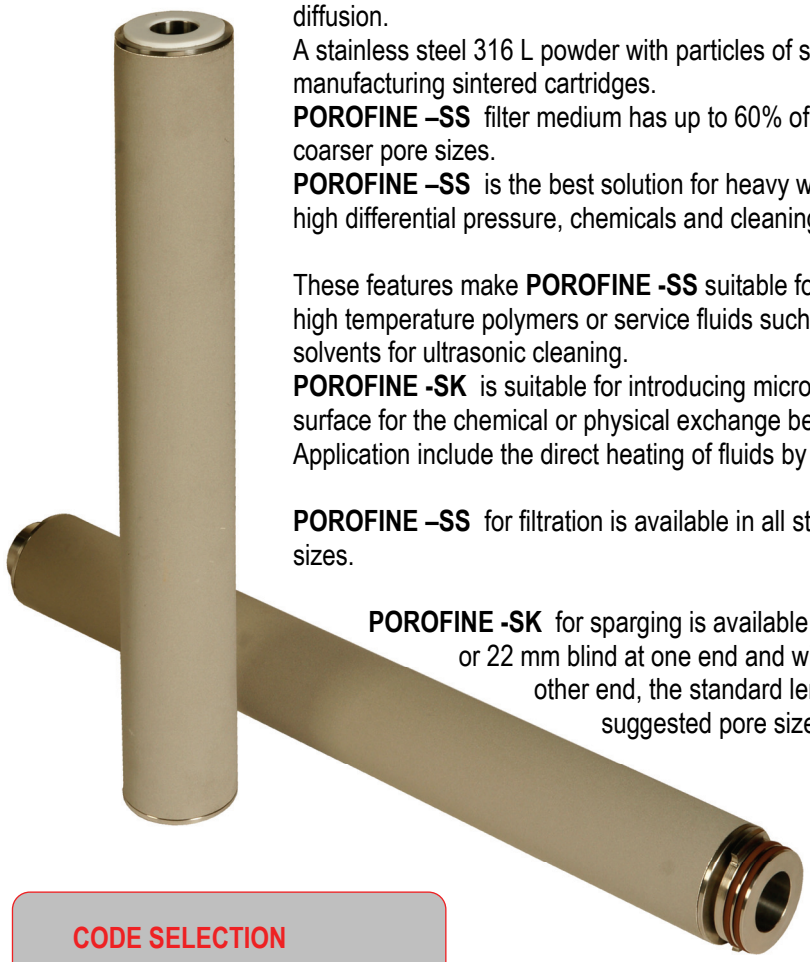
PoroFine – SS/SK

Sintered metal filter cartridges & spargers

POROFINE-SS filter cartridge is made by a metal sintering process, that is a solid state reaction joining metallic particles to each other.
At temperatures well below melting point, bridges are formed between the particles by diffusion.
A stainless steel 316 L powder with particles of selected size is the basic material for manufacturing sintered cartridges.
POROFINE –SS filter medium has up to 60% of the volume made up of voids for the coarser pore sizes.
POROFINE –SS is the best solution for heavy working conditions. It can easily withstand high differential pressure, chemicals and cleaning by back flushing.

These features make **POROFINE -SS** suitable for filtration of many process fluids such as high temperature polymers or service fluids such as saturated steam for sterilisation or solvents for ultrasonic cleaning.
POROFINE -SK is suitable for introducing micro-bubbles into liquids to offer a large contact surface for the chemical or physical exchange between gas and liquid.
Application include the direct heating of fluids by steam, sparging of beer and wine etc.

POROFINE –SS for filtration is available in all standard lengths, configurations and pore sizes.



POROFINE -SK for sparging is available as tubes with an outer diameter of 60 mm or 22 mm blind at one end and with a threaded BSP connection at the other end, the standard lengths are as per code selection table suggested pore sizes are 3 and 5 micron.

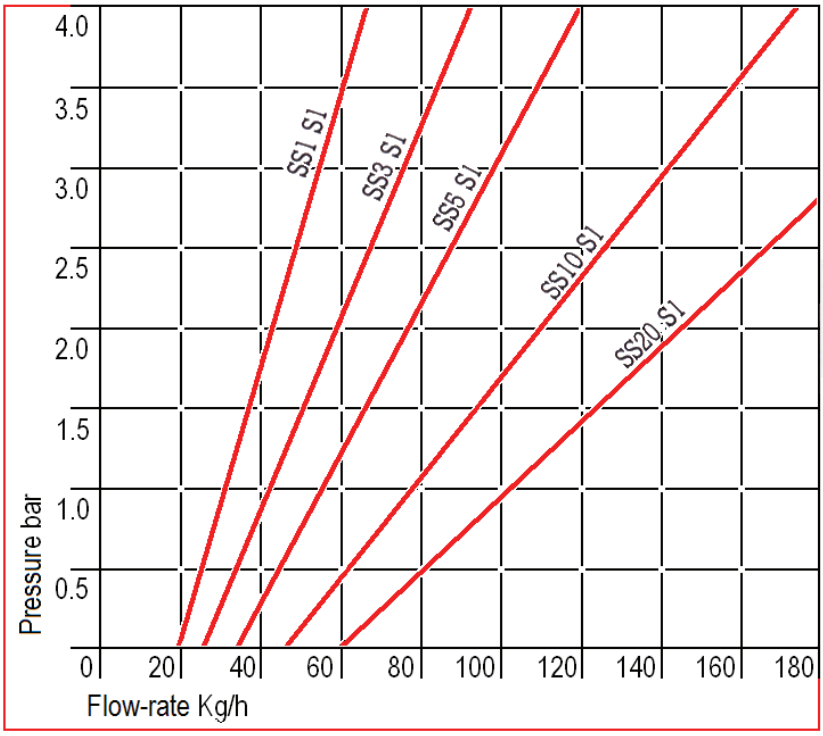
Special parts can be designed according to customer specification.
Possible deviations from standard can involve dimensions as well as material and porosity of the cartridge.

CODE SELECTION

SS	**5**	**- 60 -**	**2**	**A**	**1**	**V**
Application **Filter** = SS	**Porosity (µm)** 1 3 5 10 20	**Outer diameter (mm)** -60-	**Length (inch)** 10" = 1 20" = 2 30" = 3 40" = 4	**End "1"** Open with flat gasket = A Capped = C Spike = P	**End "2"** Open with flat gasket = 1 O.R. 222 = 8 O.R. 226 = 7	**Gaskets** Buna = N Viton = V Silicone = S EPDM = E PTFE = T
Sparger = SK	1 3 5 10 20	- 60- - 22-	**Length (mm)** 125 - 250 - 500 80 - 165	Blind = C None = X	Port Threaded = U None = X	
SK	**1**	**- 22 -**	**80**	**X**	**X**	

PoroFine – SS Porous stainless steel filter elements

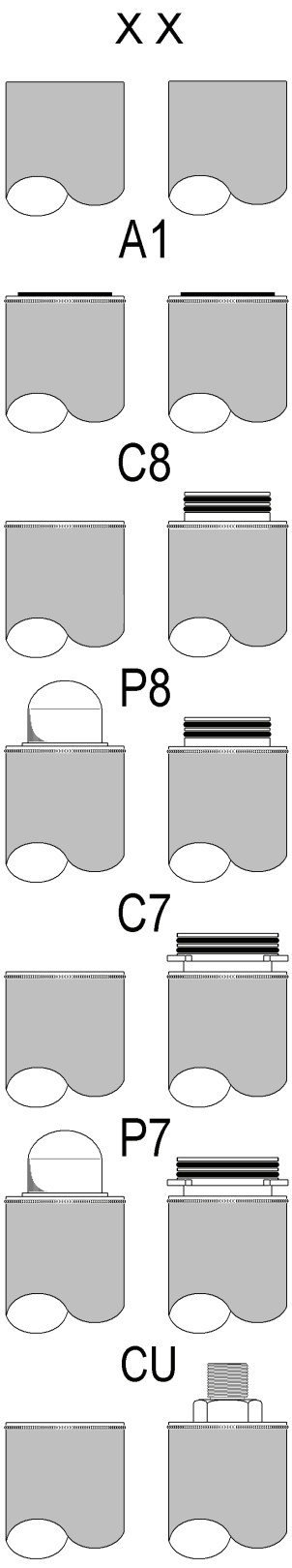
Saturated steam flow-rate for a 10” element assuming 0.1 bar as clean pressure drop



Chemical compatibility of porous stainless steel

Fluid	Concentration	AISI 316 ss compatibility	Recommended gasket
ACIDS			
• Nitric Acid	max 10%	satisfactory	All
• Nitric Acid	10% - 80%	satisfactory	PTFE
• Hydrochloric Acid	max 30%	not recommended	PTFE
• Sulphuric Acid	max 75%	not recommended	Viton
• Sulphuric Acid	75% - 95%	limited resistance	Viton
• Sulphuric Acid	95% - 100%	satisfactory	Viton
BASES			
• Sodium Hydroxide	max 40%	satisfactory	EPDM
• Potassium Hydroxide	max 30%	satisfactory	EPDM
STERILIZING AGENTS			
• Sodium Hypochlorite	All	acceptable	EPDM
• Hydrogen Peroxide	All	satisfactory	All
• Ethylene Oxide	All	satisfactory	Neoprene
OTHER CHEMICALS			
• Organic Solvents	-	very good	PTFE
• Sea Water	-	acceptable	All
• Deionized Water	-	satisfactory	All

Filter cartridge end configurations



Standard Filter Bags

Our range

- Polypropylene & Polyester "Melt-Blown" depth filter bags with sintered fibres and measurable efficiency
- Extended life Polypropylene & Polyester filter bags made from a special felt to guarantee a long life
- Conventional felt filter bags available in many different polymers for the widest chemical compatibility
- Nylon, Polypropylene, Polyester monofilament filter bags with absolute retention from 1 to 1200 micron
- Polyester multifilament filter bags
- Nomex and PTFE filter bag suitable for critical process conditions
- Multi-layer filter bags manufactured according to customer specifications

Some applications

- Paint & varnish
- Solvents
- Adhesives
- Ink
- Industrial lining and coatings in general
- Emails
- Resins
- Intermediate chemicals
- Oil removal from cathaphoresis treatments
- Colloids removal in all applications
- Water pre and final filtration in all applications
- A variety of applications in food & beverage
- Wine filtration in many phases of the production

Standard versions:

- Integrally thermo-welded provided with moulded polypropylene sealing ring
- Sewn with metal or polypropylene sealing ring
- Four standard sizes to match the most popular dimensions, special sizes available on application

All bag components are silicon free, filter bags manufacturing is in a restricted environmental area according to ISO 9002 regulations

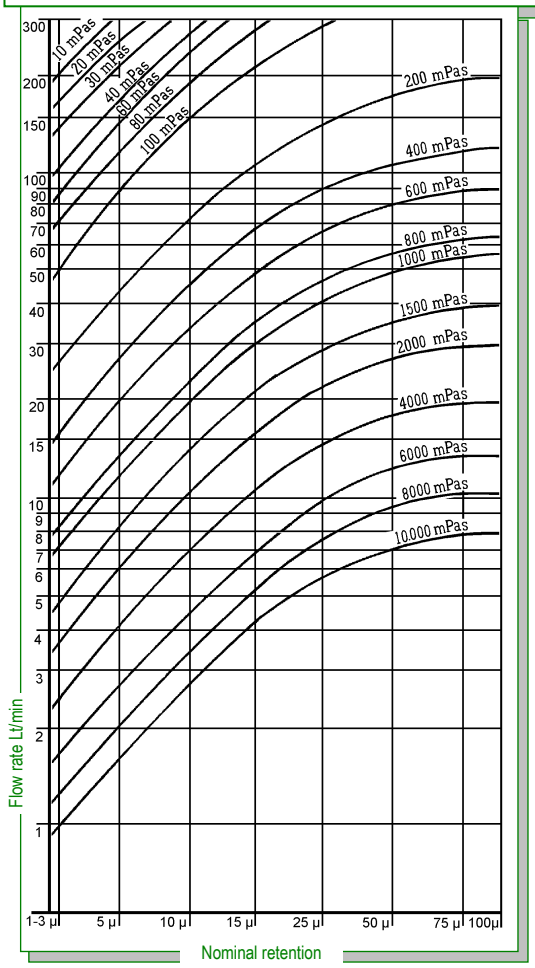
FILTER BAG CODE SELECTION

Filter Bag version	Micron rating	Filter media	Filter bag size	Sealing ring material	Handle
- - sewn **WE** - thermowelded	From 1 to 1000 micron (see table 3)	**P** - Polypropylene felt **PE** - Polyester felt **N** - Nylon felt **XR** - PVDF felt **NX** - Nomex felt **NMO** - Nylon monofilament **PEMO** - Polyester monofilament **PEMU** - Polyester multifilament **PPM** - Polypropylene monofilament **PX** - Polypropylene "Extended Life" **PEX** - Polyester "Extended Life" **MBP** - Polypropylene "melt-blown" **ECTFE** - ECTFE mesh	**1M** – size 3 **2M** – size 4 **1** – size 1 **2** – size 2 **6** – size 6 (see table 1)	**SR** - Carbon steel **SSR** - Stainless steel **SB** - SS band **PPR** - Polypropylene ring **WR** - Polypropylene Welseal **H** - Poliestere "Welseal" **PR** - Santoprene **TC** - Latch **NR** - No ring	**-** - None **WH** - Single **WHS** - Double **WLS** - Reinforced
WE	**50**	**P**	**2**	**WR**	**-**

Filter bag technical specifications

Flow-rate of a filter bag in function of the fluid viscosity

- Filter media: Polypropylene felt
- Initial pressure loss 0.07 bar
- Filter bag size: 1



Micron	Mesh
1.000	18
840	20
710	25
590	30
500	35
420	40
350	45
297	50
250	60
210	70
177	80
149	100
125	120
105	140
88	170
74	200
62	230
53	270
44	325
37	400
30	500
20	625
15	1.000
10	1.250
5	2.500

Micron / Mesh conversion table (for monofilament filter bags)

Table 1

	Filter bag size				
	1M	**2M**	**1**	**2**	**6**
Filter area	0.05 m²	0.09 m²	0.19 m²	0.41 m²	0.80 m²
Internal volume	1.4 lt	2.5 lt	7.9 lt	17.3 lt	--
Ring diameter	102 mm	102 mm	178 mm	178 mm	178 mm
Length	229 mm	381 mm	419 mm	813 mm	1600 mm

Table 2

Filter media Material	Chemical compatibility & max working temperature				
	acids	**bases**	**solvents**	**oxidizing agents**	**°C**
Polyestere	good	good	excellent	limited	110
Polypropylene	excellent	excellent	good	excellent	90
Nylon	fair	good	excellent	fair	100
Viscose	limited	limited	excellent	limited	100
Nomex	good	good	excellent	excellent	200
PTFE	excellent	excellent	excellent	excellent	250

(¹) - Filter bags provided with "Welseal" ring - max temperature 90°C

FILTER MEDIA & MICRON RATINGS AVAILABLE

Table 3

	nominal micron rating	0,5	0,6	0,8	1	3	5	10	15	25	40	50	55	60	75	85	100	125	150	200	210	250	300	400	500	600	800	1000	1200	1500
P	Polypropylene felt				■		■	■		■		■			■		■		□	■										
PX	Polypropylene Extended life felt				■		■	■		■		■			□		■													
PE	Polyester felt				■		■	■		■		■			■		■		□	■										
PEX	Polyester Extended life felt	■			■		■	■		■		■			□		■													
N	Nylon felt				■		■	■		■		■			□		■			■										
NX	Meta Aramid (Nomex) felt				■		■	■	□	□	□	■	□	□	□		■		□	□										
ALP	Allipure (Polypropylene)		■	■	■	■	■																							
AFSS	500 Series (Polypropylene)				■		■	■		■																				
OA	OA Series (Polypropylene)				■		■	■		■																				
MBP	MBP Series (Polypropylene)				■		■	■	■	■																				
MBPE	MBPE Series (Polyester)				■		■																							
NMO	Nylon monofilament mesh				■		■	■		■	■	■		■	■		■	■	■	■		■	■	■	■	■	■	■	■	■
PMO	Polypropylene monofilament mesh																□		■			■		■		■				
PEMO	Polyester monofilament mesh												■				■		□	■			■	■		□				
PEMU	Polyester multifilament mesh																■		■			■	□	■	■					
PVDF	PVDF monofilament																		■											
TFE	ETFE/ECTFE monofilament															■					■	■		■	■	■				
PTFE	PTFE felt				■		■	■																						

■ Available
□ Availability to be confirmed

Extended Life Filter Bags

Description:
Extended Life filter bags are available in polypropylene or polyester in micron ratings from 1-100, and have a lifetime of up to 4 times that of the equivalent standard filter bag. Increased thickness of the filter media compared to that of the equivalent standard filter bag enables an increased retention of particles, resulting in a prolonged filter bag lifetime.
The extended life filter media also has an asymmetric structure, which acts to increase the filter bag lifetime and enhance filtration efficiency. Progressively smaller particles are captured as the fluid follows a tortuous path through the graded density media, stopping the filter bag from blinding prematurely, whilst capturing a higher percentage of particles.

Features:

- More efficient filtration process
- Minimisation of equipment downtime
- Minimisation of engineer exposure to process liquids
- Fewer bags to change and dispose of compared with standard felt filter bags - more environmentally friendly
- Excellent at removing deformable particles such as gels
- Conforms to EC food contact directives

Additional Information:
As standard, the extended life filter bag is fully welded, maximising filtration efficiency by eliminating fluid bypass through needle holes or around a snap ring. The external surface is highly glazed, eliminating fibre migration into the filtrate.

EXTENDED LIFE FILTER BAGS - CODE SELECTION

Filter Bag Version	Nominal retention	Filter media	Filter bag size	Sealing ring material
WE - thermowelded	**1** = 1 micron **5** = 5 micron **10** = 10 micron **25** = 25 micron **50** = 50 micron **100** = 100 micron	**PX** - Polypropylene "Extended Life" **PEX** - Polyester "Extended Life"	**1** – size 1 **2** – size 2	**WR**- Polypropylene Welseal **H** - Polyester Welseal
WE	**5**	**PX**	**2**	**WR**

Magnetic candle adaptor for standard bag filter housings

Description:

Interception by means of high magnetic flux density allows the removal of ferrous particles when the presence of the same is expected in the treated fluid.
Neodymium magnetic candles are coated with AISI 316 stainless steel tubes and are assembled with suitable supports to allow an easy installation into conventional bag filter housings.
They can be used as a sole stopping system, or in combination with a filter bag that provides to also carry out the physical interception of particles which are not attracted by magnets.

Benefits:

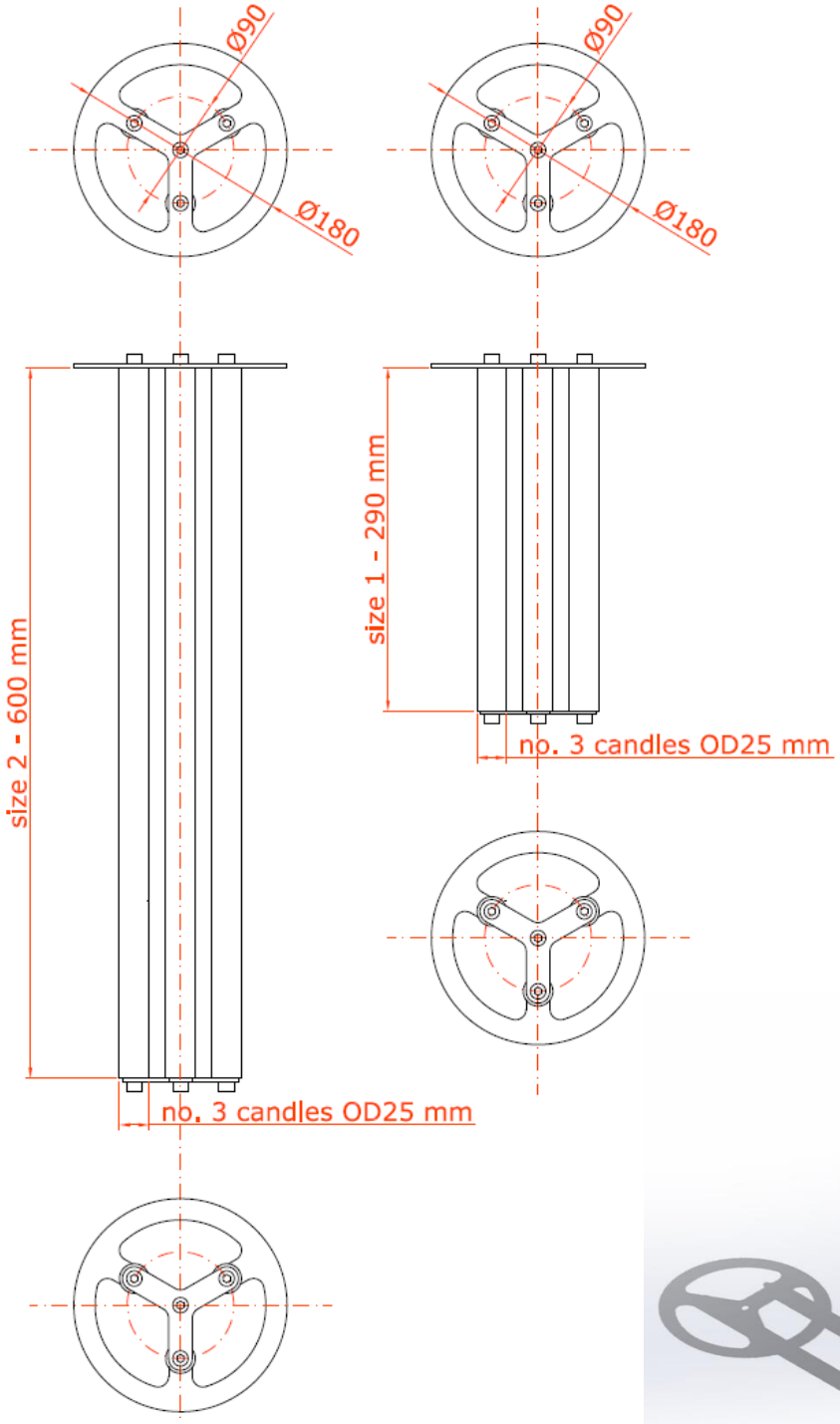
- Captures ferrous particles down to sub-micron dimensions
- 100% cleanability, no replacement due to prolonged use
- Absence of waste destined for disposal
- Suitable for contact with food substances thanks to the stainless steel coating

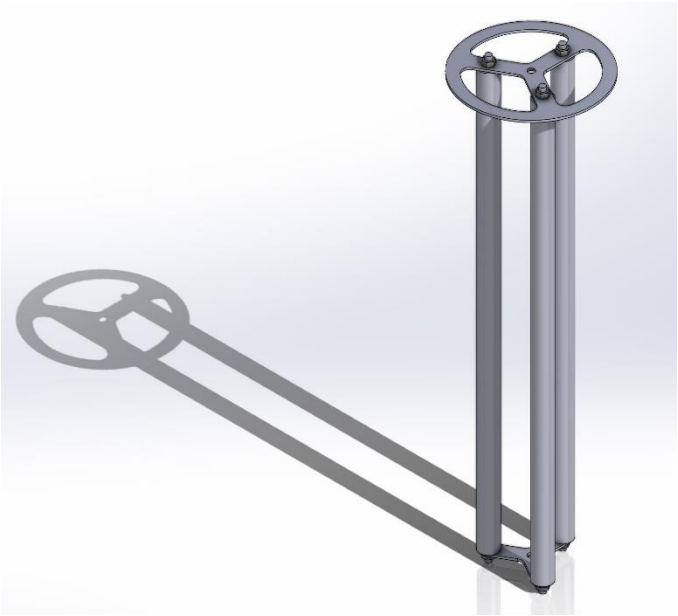
Technical features

Material	Neodymium N45
Candle diameter	25 mm
Length	In relation to the filter housing
Candle coating	AISI 316
Max working temperature	120°C
Nominal flux density	11000 Gauss

Ordering information

Code: PCM-SZ1-25-03	Size 1 bag filter housings with 3 magnetic elements
Code: PCM-SZ1-25-04	Size 1 bag filter housings with 4 magnetic elements
Code: PCM-SZ2-25-03	Size 2 bag filter housings with 3 magnetic elements
Code: PCM-SZ2-25-04	Size 2 bag filter housings with 4 magnetic elements





SX/SY adaptors

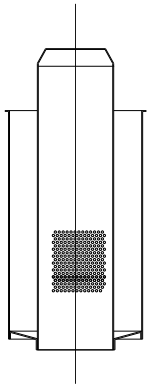
Twice as much filter area of conventional filter bags

Scope is to overcome one possible limit of conventional filter bags, sometimes in fact the poor filter area does not permit to complete the batch filtration.

One solution to that problem is to have two equal bag filters in parallel, that way one has a major investment and also a major loss of product at the end of the batch.

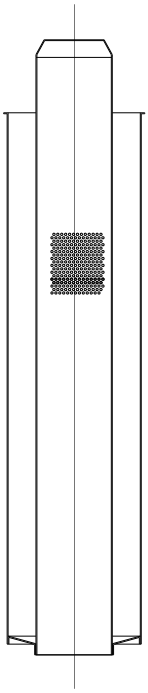
Our SX/SY system offers the possibility to double the filter area simply fitting a new basket in the same filter housing, then choosing our longer filter bag elements

Benefits:
- Twice the original filter area
- Same internal volume
- No interventions on original housing
- End-user can change the filter basket without tools
- Minimum cost of the new part
- Filter element is cost effective if compared with two conventional filter bags



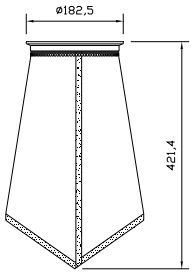
Restrainer basket RB316SX, designed to double the filter area of a conventional filter type MRS1SW1G50E.

Once fitted into the housing, Size 2 filter bags can be used instead of the original Size 1

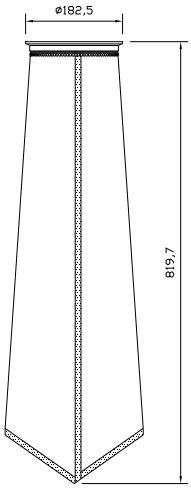


Restrainer basket RB316SY, designed to double the filter area of a conventional filter type MRS1SW2G50E.

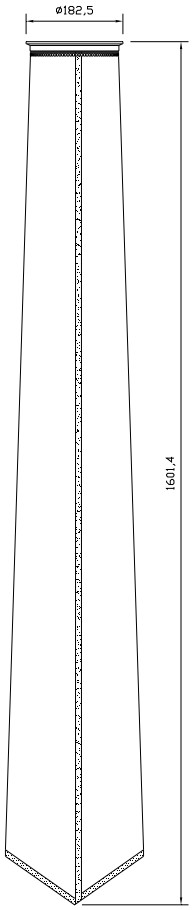
Once fitted into the housing, Size 6 filter bags can be used instead of the original Size 2



Size “1” filter bag
Filter area 0.19 m2
Suitable for Size 1 filter housings type
MRS1SW1G50E



Size “2” filter bag
Filter area 0.41 m2
Suitable for Size 2 filter housings type – MRS1SW2G50E or Size 1 filter housings only if provided with SX adaptor, then the new code is MRS1SWXG50E



Size “6” filter bag
Filter area 0.82 m2
Suitable only for Size 2 filter housings provided with SY adaptor, the code is
MRS1SW6G50E

LD1P-LD1M series

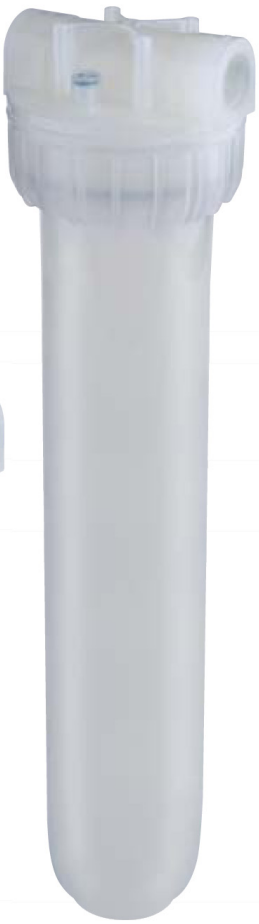
Plastic single cartridge filter housings

Benefits of LD1 plastic filter housings:

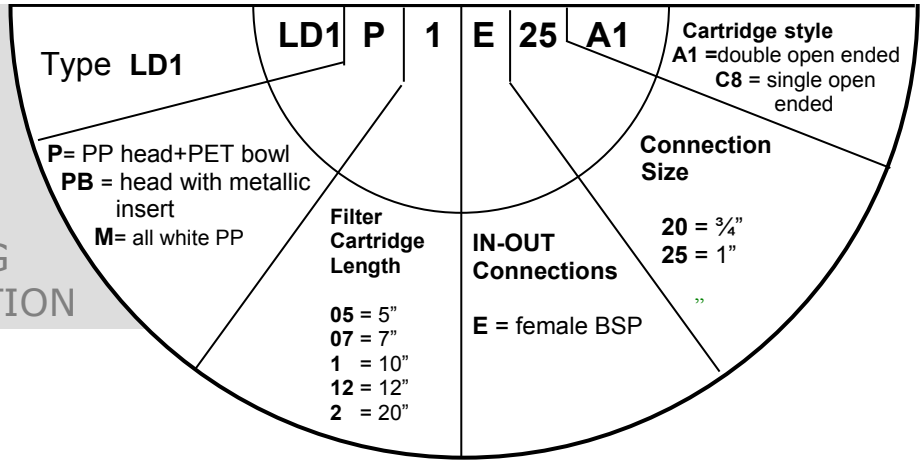
- Visual check of filter element status of version with PET bowl
- Light but strong construction
- Very good and wide chemical compatibility of polypropylene version
- Cost effective
- Many cartridge lengths available; 5”, 7”, 10”, 12”, 20”
- Two possible cartridge configuration A1 (DOE) and C8 (SOE)

LD1P
LD1PB

LD1M



ORDERING INFORMATION



LD1P-LD1M series

A1 style

C8 style

MAIN APPLICATIONS

LD1P
- Water filtration from distribution network
- Water filtration from well
- Filtration of non-aggressive water solution

LD1M
- Aggressive chemicals filtration
- Electronics, filtration of chemicals compatible with polypropylene
- Electronics, water filtration when resistivity recovery is essential
- Electroplating solutions filtration
- Filtration of most solvents of paint and varnish

Operating conditions for all models

- Max pressure: 8 bar
- Max temperature: 45°C
- Min temperature: 4°C

ACCESSORIES available on request

- Wall bracket
- Spanner

LV1SS

Single cartridge filter housings

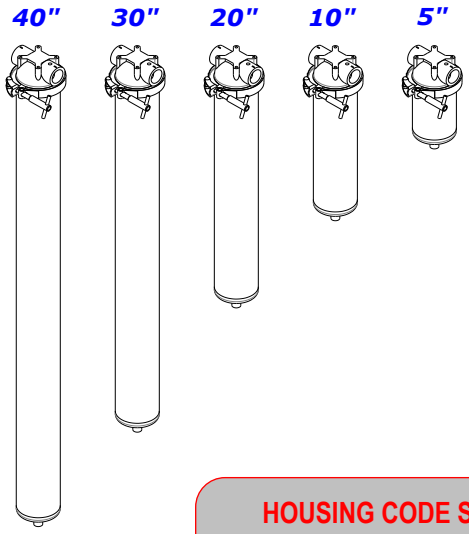
Standard filter housings designed for industrial multi-purpose applications, LV1SS are reliable and consistent.

Main features

- 316 ss precision cast head
- Head-bowl coupling by means of a quick release vee-clamp, cartridge and head sealing are independent
- Five different cartridge configurations, P7, P8, A1, C7, C8
- Five possible filter element nominal length 5", 10", 20", 30", 40"
- Stainless steel bowl mechanically polished outside
- 1" BSP IN-OUT port size

Applications

- All fluids chemically compatible with 316 ss



HOUSING CODE SELECTION

Single cartridge filter housings	Filter head material	Filter bowl material	Cartridge length	IN-OUT ports	IN-OUT port size	Cartridge configuration	Bowl surface finish
series = LV1	AISI 316= S	AISI 316 = S	5" = 05 10" = 1 20" = 2 30" = 3 40" = 4	BSP = E Flanged BSP = F Flanged ANSI = A	1" = 25	OR 226/fin = P7 OR 222/fin = P8 DOE = A1 OR 226/flat = C7 OR 222/flat = C8	Mechanically polished = L
LV1	S	S	2	E	25	P8	L

LV1SS

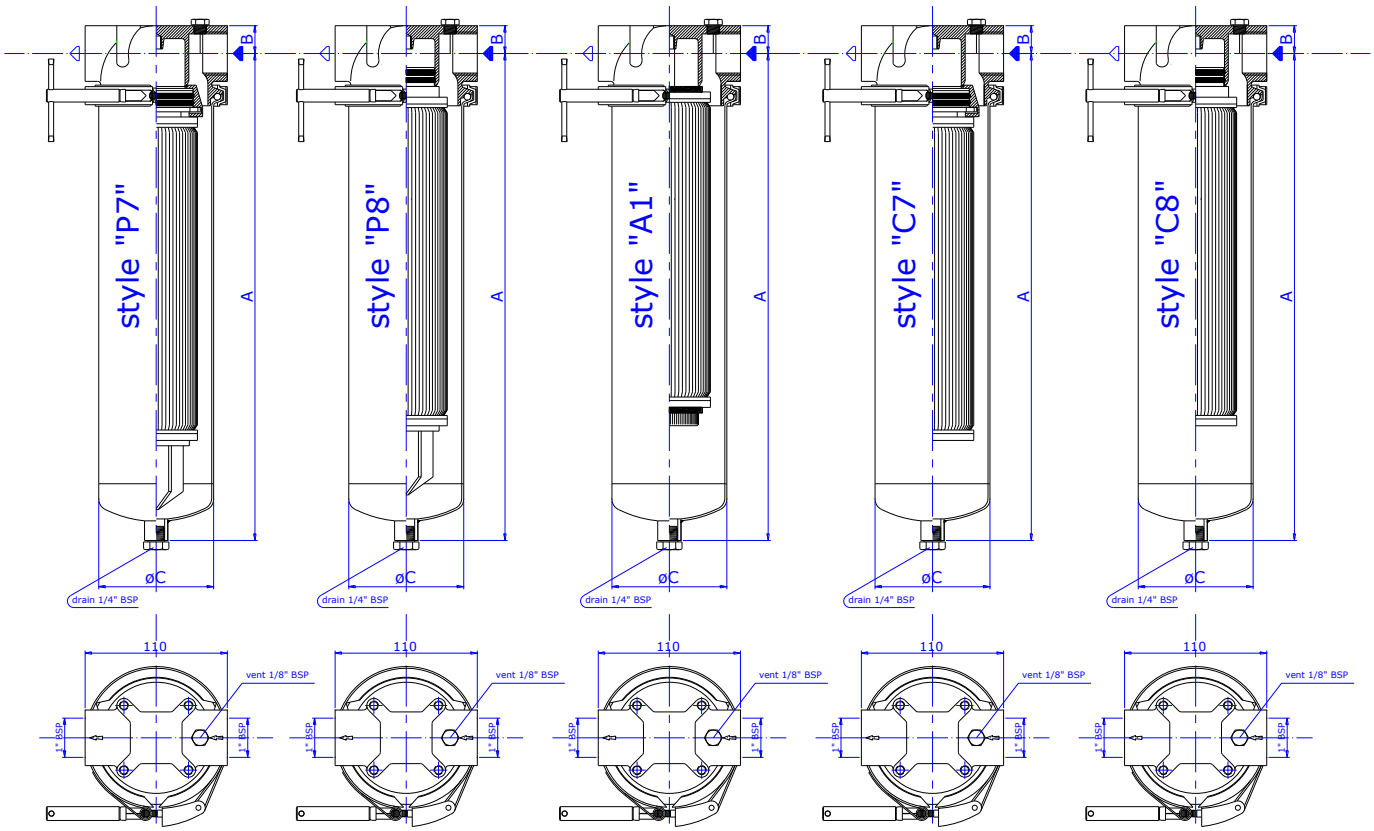


Table 1

Filter code	Cartridge nominal length	Dimensions mm A	B	øC	Standard IN-OUT connections	"Sound Engineering Practice" (art. 4.3) directive 2014/68/UE application criteria: Internal volume litres	liquids Group 1 PSxV=200	liquids Group 2 PSxV=10000	gases Group 1 PSxV=25	gases Group 2 PSxV=50
LV1S S05 E 25 L...	125 mm (5")	227	22	88,9	1" BSP internal thread	1,31	16 bar	16 bar	FOR GAS FILTRATION **LD1** SERIES IS RECOMMENDED	
LV1S S1 E 25 L...	250 mm (10")	377				2,18	16 bar	16 bar		
LV1S S2 E 25 L...	500 mm (20")	637				3,68	16 bar	16 bar		
LV1S S3 E 25 L...	750 mm (30")	891				5,15	16 bar	16 bar		
LV1S S4 E 25 L...	1000 mm (40")	1145				6,70	16 bar	16 bar		

Max operating pressure
Our LV1SS filter housings are manufactured in accordance with the European Directive 2014/68/UE "PED" art. 4.3
For application criteria please see Table 1

Defintions: Liquid = a liquid with a vapour tension < 0.5 bar at working temperature
Gas = a gas or a liquid with vapour tension > 0.5 bar at working temperature

Group 1 comprises fluids defined as: - explosive, - extremely flammable, - highly flammable, - flammable (where the maximum allowable temperature is above flashpoint), - very toxic, - toxic, - oxidizing.
Group 2 comprises all other fluids not referred to Group 1 (i.e – water, air, nitrogen)

Max operating temperature: 100°C at 16 bar with water **(*)**

(*) – Always take into consideration gasket material and vapour tension of the fluid

According to the directive 97/23/CE each housing is provided with Instruction Handbook and Filterflo declaration of compliance.

LD1

Single cartridge filter housings

LD1 is a high quality filter housing to provide safety and reliability in all working conditions. As the coupling body-bowl is designed to prevent unscrewing when in pressure, they are suitable also in compressed air, gas and saturated steam service.

Benefits

- Filter head is machined from solid to offer a smooth surface preventing bacteria growth
- Head-bowl coupling is provided by a threaded round nut that prevents unscrewing when in pressure, clamped systems cannot offer the same reliability
- Filter bowl with minimum seams
- Three different cartridge configurations acceptable
- Heavy duty construction, max reliability in every condition
- Four different cartridge lengths to a maximum of 2 m² of filter area

Standard IN-OUT connections 1"BSP, flanged versions available on application. Also DIN 11851 and Tri-Clover connection are available according to customer specifications
Standard finish is electropolishing inside and outside, other surface treatments are available

Please select your LD1 from the table below, drawing with outline dimensions can be found at the back of this page.

Main applications

- Water filtration
- Process fluids filtration
- Food, Beverage and pharmaceutical
- Compressed air, gas and steam filtration

HOUSING CODE SELECTION

Single cartridge filter housings	Body material	Cartridge lenght	IN-OUT connection type	IN-OUT connection size	Cartridge configuration	Surface finish
series = LD1	316 L = S	10" = 1 20" = 2 30" = 3 40" = 4	BSP Female = E BSP Male = G DIN11851 = D BSP Flange = F ANSI Flange = A Tri-Clover = T	1"(DN25) = 25	DOE = A1 OR 222 = P8 OR 226 = P7	Plickling = J Outer Mechanical polishing = L In+Out Mechanical polishing = LL Electropolishing = E
LD1	S	2	E	25	P8	E

LD1

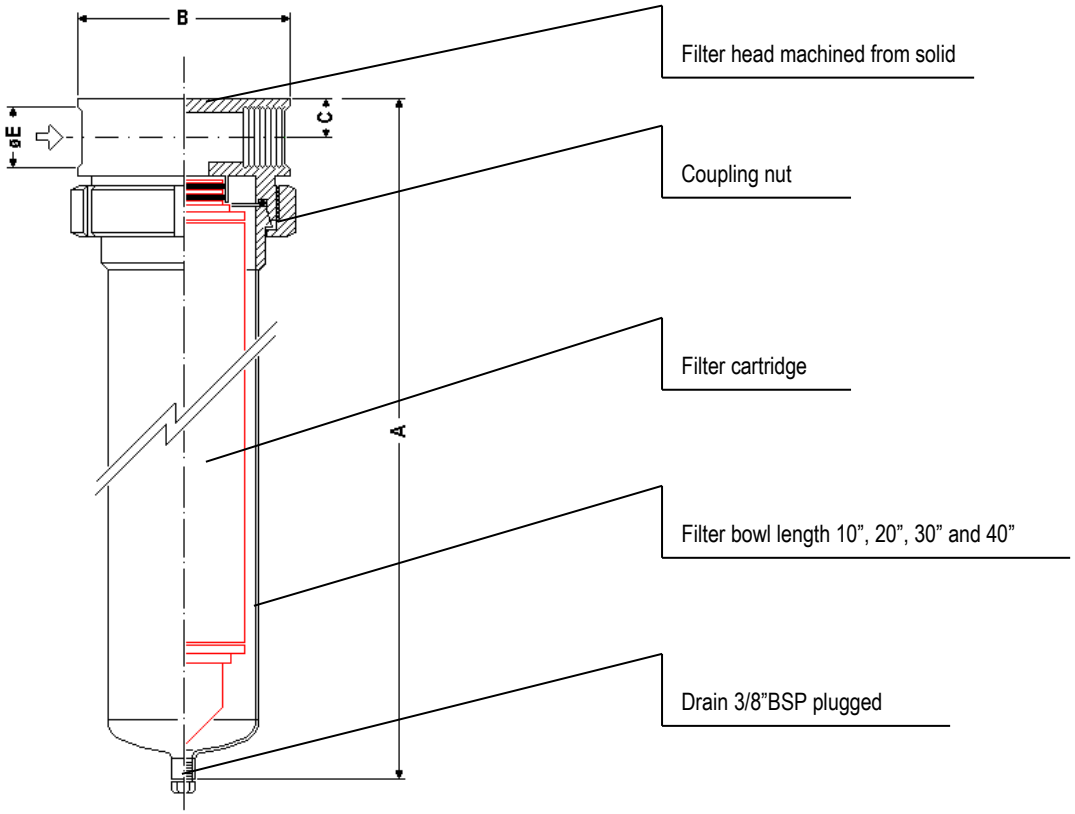


Table 1

Filter type	Cartridge nominal length	Dimensions mm A	B	C	Standard IN-OUT connections øE	"Sound Engineering Practice" (art. 4,3) directive 2014/68/UE application criteria: Internal volume litres	liquids Group 1 PSxV=200	liquids Group 2 PSxV=10000	gases Group 1 PSxV=25	gases Group 2 PSxV=50
LD1 S1 E 25 ...	250 mm (10")	385	120	22	1" BSP female	2,08	20 bar	20 bar	12 bar	20 bar
LD1 S2 E 25 ...	500 mm (20")	638				3,24	20 bar	20 bar	7 bar max	15 bar
LD1 S3 E 25 ...	750 mm (30")	891				4,51	20 bar	20 bar	5 bar max	11 bar max
LD1 S4 E 25 ...	1000 mm (40")	1145				5,82	20 bar	20 bar	4 bar max	8 bar max

Max operating pressure
According to the European Directive 2014/68/UE "PED", our LD1 filter housings are manufactured under the art. 4.3.
The limits of application of LD1 filter housings are listed in Table 1, please evaluate suitability in relation with your fluid and working conditions.

Defintions: Liquid = a liquid with a vapour tension < 0.5 bar at working temperature
Gas = a gas or a liquid with vapour tension > 0.5 bar at working temperature
Group 1 comprises fluids defined as: - explosive, - extremely flammable, - highly flammable, - flammable (where the maximum allowable temperature is above flashpoint), - very toxic, - toxic, - oxidizing.
Group 2 comprises all other fluids not referred to Group 1 (i.e – water, air, nitrogen)

Max operating temperature: 100°C at 20 bar with water (*)

(*) – Always take into consideration gasket material and vapor tension of the fluid, in doubt please contact Filterflo office

According to the directive 2014/68/UE each housing is provided with Instruction Handbook and Filterflo declaration of compliance.

HB1

Heavy duty single cartridge filter housings

High pressure standard filter housing

Benefits

- Three different cartridge configurations acceptable
- Heavy duty construction, max reliability in every condition
- Four different cartridge lengths to a maximum of 2 m² filter area

Standard IN-OUT connections 1" NPT or BSP, flanged versions available on application.

Standard finish is electropolishing, other surface treatments are available

Please select your HB1 from the table below, drawing with outline dimensions can be found on the back of this page.

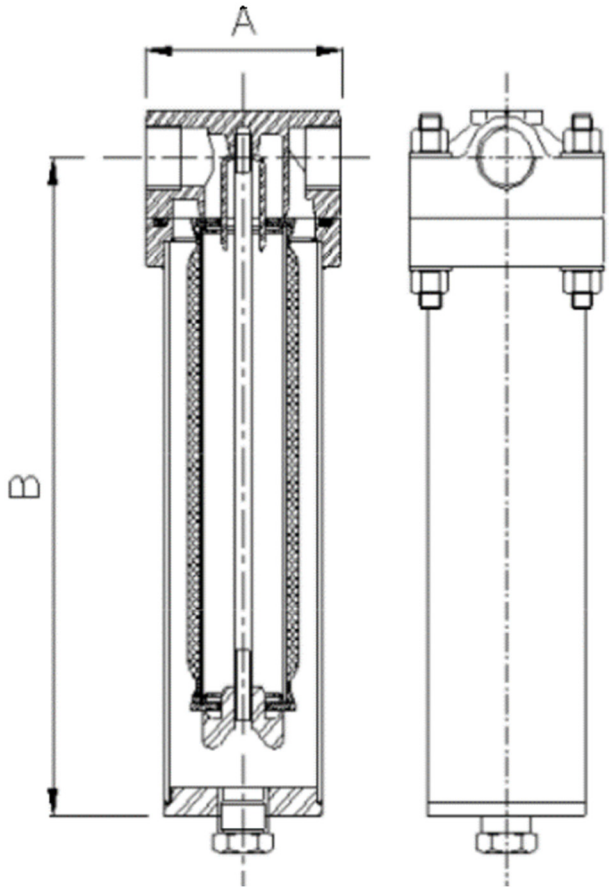
Main applications

- Water filtration
- Process fluids filtration
- Compressed air, gas and steam filtration

HOUSING CODE SELECTION

Single cartridge filter	Head & body material	Cartridge length	IN-OUT Standard ports	IN-OUT Port size	Cartridge style	Surface finishing
series = HB1	316 L = SS	10" = 1 20" = 2 30" = 3 40" = 4	NPT = N BSP = E BSP flange = F ANSI flange = A	1" = 25 #	DOE = A1 OR 222 = C8 OR 226 = C7	Pickling = J E-polishing = E
HB1	SS	2	N	25	A1	J

HB1



Filter type	Cartridge nominal length	Dimensions mm B*	Dimensions mm A	Internal volume litres	Empty weight Kg	liquids Group 1 PSx V=200	liquids Group 2 PSx V=10000	gases Group 1 PSx V=25	gases Group 2 PSx V=50
HB1 SS1 .. 25 ...	250 mm (10")	356	110	1,60	9,00	69 bar	69 bar	15,5 bar	31 bar
HB1 SS1 .. 25 ...	500 mm (20")	606		3,00	13,00	66 bar	69 bar	8,3 bar	16,6 bar
HB1 SS1 .. 25 ...	750 mm (30")	871		4,50	15,00	44 bar	69 bar	5,5 bar	11 bar
HB1 SS1 .. 25 ...	1000 mm (40")	1120		5,70	22,00	35 bar	69 bar	4,3 bar	8,7 bar

(*) - For cartridge configuration C7 dimension B is 50 mm longer

Max operating pressure
According to the European Directive 2014/68/UE "PED", our HB1 filter housings are manufactured under art. 4.3.
The limits of application of HB1 filter housings are listed into Table 1, please evaluate suitability in relation with fluid handled and working conditions.

Defintions: Liquid = a liquid with a vapour tension < 0.5 bar at working temperature
Gas = a gas or a liquid with vapour tension > 0.5 bar at working temperature
Group 1 comprises fluids defined as: - explosive, - extremely flammable, - highly flammable, - flammable (where the maximum allowable temperature is above flashpoint), - very toxic, - toxic, - oxidizing.
Group 2 comprises all other fluids not referred to Group 1 (i.e – water, air, nitrogen)

Max operating conditions: 69 bar at 100°C with water (*)

(*) – Always take into consideration gasket material and vapor tension of the fluid, in doubt please contact Filterflo office

According to the directive 2014/68/UE each housing is provided with Instruction Handbook and Filterflo declaration of compliance.

MVB

Standard multi-cartridge filter housings

Main applications

- Water in all industrial applications
- Process chemicals when compatible with stainless steel

MVB are typical general purpose multi-cartridge filter housings, the largest ones can handle flow-rates up to 45 m3/h.

Standard material is 316 stainless steel to offer a wide chemical compatibility and easy cleaning.

Internals are designed to hold the most common cartridge configurations:

- **A1M** – double open ended with polypropylene internals
- **A1S** – double open ended with stainless-steel internals
- **P8** – 2-222 standard o rings with spear
- **C8** – 2-222 standard o rings with flat end
- **P7** – 2-226 standard o rings with bayonet and spear

All **MVB** filter housings can accept every kind of standard elements; melt-blown cartridges, string-wound elements, pleated disposable and metallic cleanable.

By changing the bell, different cartridge length can fit the same housing, this enhance the flexibility of the filter offering the possibility of future increase of the flow-rate just making few easy interventions.

Standard IN-OUT connections are BSP threaded male or female. Many adaptors are available to fit different standards such as DIN 11851, Tri Clover etc.
All MVB's can also be provided with standard flanges.
Standard finish is pickling plus outer mechanical polishing, electro-polishing is also available on application.
All filters are provided with stainless steel adjustable legs as standard.
Please find ordering information in the housing code selection table below, further details and outline drawings are available in the back page.

HOUSING CODE SELECTION

Standard multi-cartridge filter housings	N° of cartridges	Body material	Cartridge length	IN-OUT connections	IN-OUT Connection size	Cartridge configuration	Surface finish
series = MVB	3 6 (*) 7	316ss = S	10" = 1 20" = 2 30" = 3 40" = 4	BSP Male = G BSP Female = E DIN11851 = D BSP Flange = F ANSI Flange = A Tri-Clover = T	1½" = 40 2" = 50 2½" = 65 3" = 80	DOE polip. = A1M DOE ss = A1S 222 FIN = P8 222 FLT = C8 226 FIN = P7	Pickling = J Mechanical polishing = L
MVB	7	S	3	E	50	P8	L

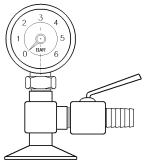
Working conditions of MVB series:
Max pressure = 8 Bar at 100°C with water

Standard 3,6, 7-round filter housings **MVB** series

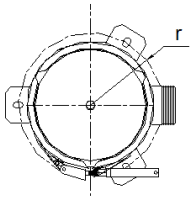
Filter type	N° of filter cartridges	Dimensions mm a	b	c	d	øf	r	Standard IN-OUT Connections	Internal Volume Litres	Sound Engineering Practice (art. 4.3) directive 2014/68/UE application criteria liquids Group 1 PSx V=200	Group 2 PSx V=10000
MVB 3 S1 ...	3 x 10"	832-971	586-725	362-501	130	168,3		available: 1½" BSP male DIN DN 40 TC 2"	8,48	8 bar	8 bar
MVB 3 S2 ...	3 x 20"	1098-1237	586-725	362-501	130	168,3			14,12	8 bar	8 bar
MVB 3 S3 ...	3 x 30"	1352-1491	586-725	362-501	130	168,3	125		19,51	8 bar	8 bar
MVB 3 S4 ...	3 x 40"	1606-1745	586-725	362-501	130	168,3			24,89	8 bar	8 bar
[1] **MVB 6 S1 ...**	6 x 10"	841-1001	580-740	322-482	165	219,1		available: 2" BSP female 2½" BSP male DIN DN 65 TC 2½"	15,94	8 bar	8 bar
[1] **MVB 6 S2 ...**	6 x 20"	1094-1254	580-740	322-482	165	219,1			25,12	7.9 bar	8 bar
[1] **MVB 6 S3 ...**	6 x 30"	1347-1507	580-740	322-482	165	219,1	142		34,31	5.8 bar	8 bar
[1] **MVB 6 S4 ...**	6 x 40"	1602-1762	580-740	322-482	165	219,1			43,57	4.6 bar	8 bar
MVB 7 S1 ...	7 x 10"	841-1001	580-740	322-482	165	219,1		available: 2" BSP female 2½" BSP male DIN DN 65 TC 2½"	15,94	8 bar	8 bar
MVB 7 S2 ...	7 x 20"	1094-1254	580-740	322-482	165	219,1			25,12	7.9 bar	8 bar
MVB 7 S3 ...	7 x 30"	1347-1507	580-740	322-482	165	219,1	142		34,31	5.8 bar	8 bar
MVB 7 S4 ...	7 x 40"	1602-1762	580-740	322-482	165	219,1			43,57	4.6 bar	8 bar

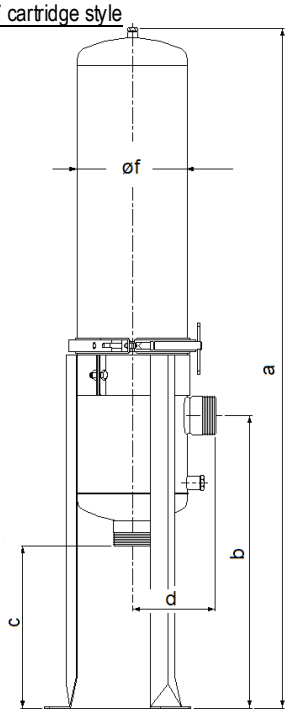
[1]) Standard 6-round version in only suitable for P7 cartridge style

OPTIONAL FITTINGS
FOR **MVB** SERIES



- Pressure gauge/vent assembly
- Flanged connections according to various international standards





Max operating pressure. According to the European Directive 2014/68/UE "PED", when dangerous liquids are involved (group 1), it is essential to observe the limits of the "Sound Engineering Practice".(art 4.3)
In this case the product PSxV must not exceed the value of 200; our MVB housings do not require the CE stamp when the pressure of the liquid does not exceed the limits indicated in tables.
When other liquids, such as water, are involved (group 2) the product PSxV must not exceed the value of 10000 in this case the max operating pressure is always 8 bar.
Max operating temperature: 100°C with water – Always take into consideration gasket material – The maximum temperature is also in relation with the "vapour tension" which is typical of each liquid. The vapour tension of the liquid must not exceed 0.5 bar at working temperature otherwise it will be considered as a gas and different design criteria must be applied.

In accordance with the directive each housing is provided with Instruction Handbook and Filterflo declaration of compliance.

All data correct at time of going to press. FRAMECH reserves the right to modify data without prior notice

MR

Standard multi-cartridge filter housings

MR are typical general purpose multi-cartridge filter housings, the largest ones can handle flow-rates up to 180 m3/h.

MAIN FEATURES
- Material: AISI304 or AISI316
- IN/OUT ports: PN10 flanges as standard equipment
- Coupling bell/body: by means of reclining clamps
- Surface finish: pickling plus mechanical polishing

FILTER ELEMENT CONFIGURATIONS
- A1 - double open ended with flat gaskets
- P8 - O-rings 222 / capped and finned on the other end
- P7 - O-rings 226+bayonet/capped and finned on the other end

RECOMMENDED FILTER ELEMENTS
- Melt-blown filter elements Proxis & Proxis Nylon
- Pleated cartridges StarFine series
- String wound cartridges StringFine series
- Metallic cleanable StarMesh, PoroFine and SintFine series

MAIN APPLICATIONS
- Water filtration – industrial applications
- Process fluids – primary and service applications

Refer to the back of page for dimensions and configuration

CATRIDGE CODE SELECTION

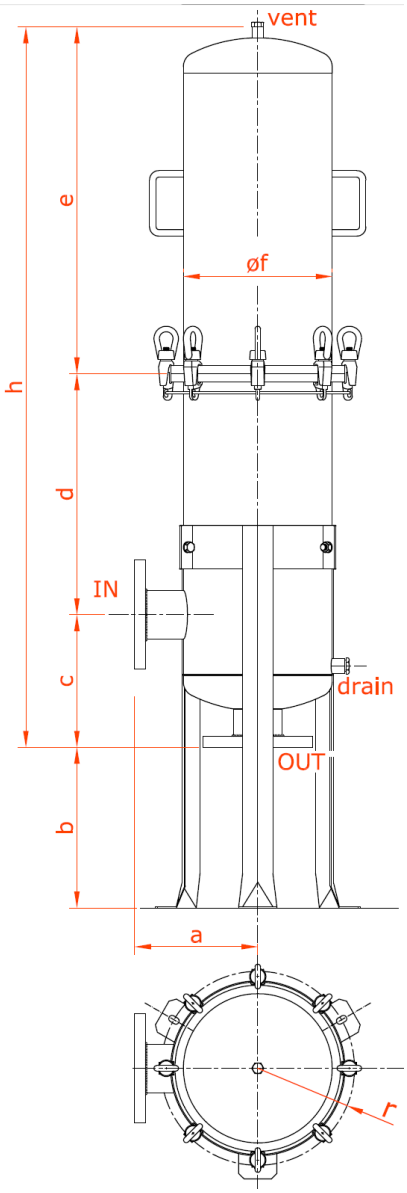
Multi-cartridge filter housings	N° of cartridges	Material	Cartridge length	IN/OUT Connection style	IN/OUT connection size	Cartridge configuration	Surface finish
series = MR	9 12 18	316ss = S 304ss = W	10" = 1 20" = 2 30" = 3 40" = 4	BSP male = G Gas Female = E DIN11851 = D BSP flange = F ANSI flange = A Tri-Clover = T	2½" = 65 3" = 80 4" = 100 5" = 125	DOE = A1 222 FIN = P8 226 FIN = P7	Pickling = J Mechanical Polishing = L Electro polishing = E
MR	9	S	3	F	80	P8	L

Note: Standard MR filter housings are not designed for gas applications, special versions are available on application

Standard filter housings for 9,12,18-round cartridges - MR series

Type	N° of cartridges	Dimensions mm h	a	b	c	d	e	r	øf	IN-OUT standard connections	Directive 2014/68/UE good manufacturing practice art. 4.3 Internal Volume - lt	liquids dangerous group 1	liquids others group 2
MR 9 S2 ...	9 x 20"	819	226	53÷320	243	441	135	178	273,9	DN80PN10	38	5,2 bar	8 bar
MR 9 S3 ...	9 x 30"	1069	226	53÷320	243	441	385				53	3,7 bar	8 bar
MR 9 S4 ...	9 x 40"	1319	226	53÷320	243	441	635				68	2,9 bar	8 bar
MR 12 S2 ...	12 x 20"	863	254	286	267	441	155	203	323,9	DN100PN10	54	3,7 bar	8 bar
MR 12 S3 ...	12 x 30"	1113	254	286	267	441	405				74	2,7 bar	8 bar
MR 12 S4 ...	12 x 40"	1363	254	286	267	441	655				94	2,1 bar	8 bar
MR 18 S2 ...	18 x 20"	881	280	280	279	441	161	218,85	355,6	DN100PN10	66	3,0 bar	8 bar
MR 18 S3 ...	18 x 30"	1131	280	280	279	441	411			as alternative	90	2,2 bar	8 bar
MR 18 S4 ...	18 x 40"	1381	280	280	279	441	661			DN125PN10	114	1,7 bar	8 bar

Important note:
Directive 2014/68/UE "PED" intends to regulate the use of pressure vessels for industrial plant applications. The table above summarizes dimensions and design of MR filters and refers to art. 4.3 of the PED, as a consequence the use of MR filters is limited to liquids of Group 2.
MR can also be used on fluids belonging to group 1 observing the maximum pressures of use indicated in the same table.
Special MR can be designed according to user specification to meet critical working conditions.
As required by regulations each MR is supplied with instruction manual and declaration of conformity.
Pressure vessels manufactured in accordance with Article. 4.3 do not require **CE** stamp.
The use of MR for compressed air and gas filtration is limited to a pressure of 0.5 bar, except special designs.



HB

Special multi-cartridge filter housings

Under the name **HB** you can find all the “Non-standard systems”, that are designed taking into account the restrictive parameters of every international safety regulation.

They are the typical filters designed in accordance with the contractors or users “Data sheet”, our internal procedure indicates for those units the following manufacturing steps:

- Choice of the filter elements; type, length, quantity
- Choice of the configuration (some examples on the reverse)
- Calculation
- Drawings for approval and manufacturing
- Manufacturing and test under inspection
- Certificates

>>>>

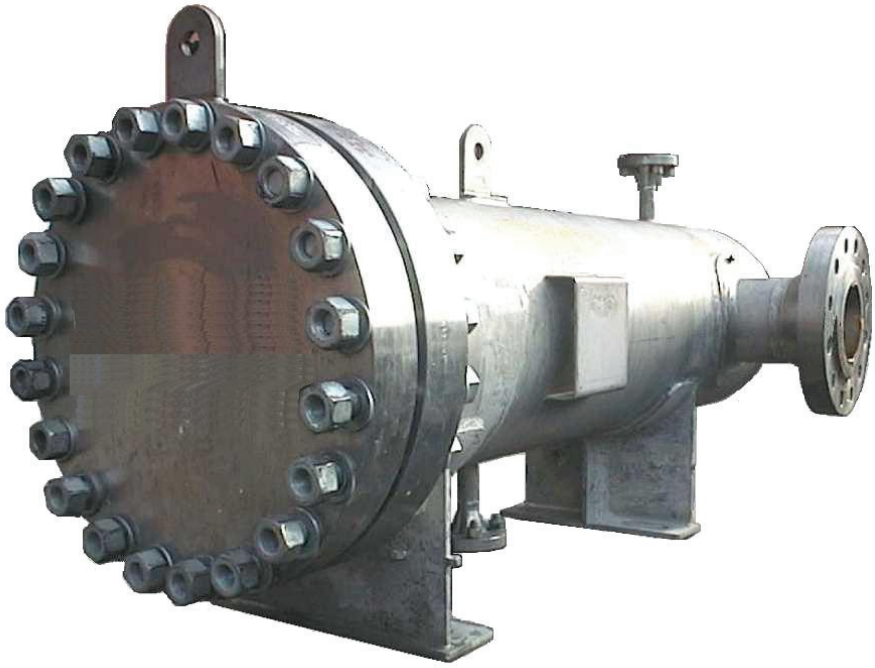


Table1

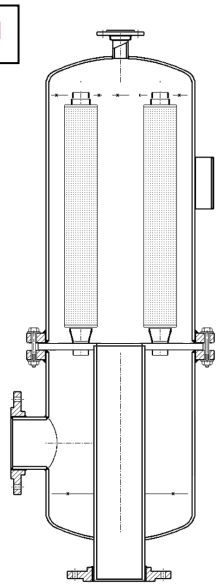
Nominal diameter	Flow-rate through IN-OUT connections at a given velocity - **m³/h** — **m/sec** - Fluid velocity **1**	**1,5**	**2**	**2,5**	**3**	**Nº** of stacks to compensate for the pipe section — cartridge **I.D.= 1"**	cartridge **I.D.= 1½"**
DN 50 / ø 2"	8,0	11,7	15,5	19,5	23,5	5	2
DN 65 / ø 2½"	11,1	16,6	22,2	27,8	33,3	6 ÷ 7	3
DN 80 / ø 3"	17,2	25,8	34,4	43,0	51,6	9 ÷ 10	5
DN 100 / ø 4"	29,6	44,4	59,3	74,1	88,9	17	8
DN 125 / ø 5"	46,5	69,8	93,0	116,4	139,6	26 ÷ 27	12
DN 150 / ø 6"	67,2	100,8	134,5	168,0	201,7	38	18
DN 200 / ø 8"	116,2	174,3	232,3	290,4	348,5	66	30
DN 250 / ø 10"	185,3	278,0	370,6	463,2	556,0	105	48
DN 300 / ø 12"	264,8	397,1	529,5	661,9	794,3	150	68 ÷ 69
DN 350 / ø 14"	319,2	478,8	638,4	798,0	957,6	180	83

HB

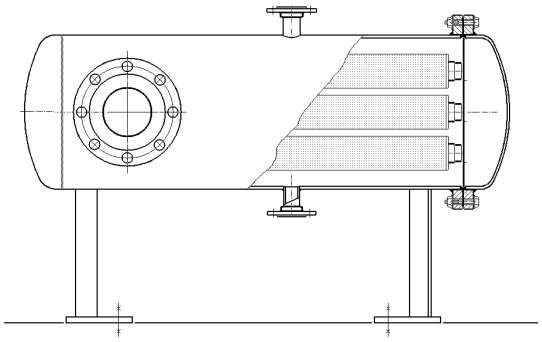
Long experience and technical resources allow us to comply with the most common international regulations. This in conjunction with the wide range of our filter elements available guarantees the customer the most appropriate solution to his filtration needs.
The configuration table below includes only few examples of our capabilities, systems such as the ones provided with heating jacket or “Blow-back” systems (backwash cleaning system with compressed air or gas) are frequently manufactured. Please contact our sales organisation to know more about **HB**.

Some of the possible configurations of the HB series

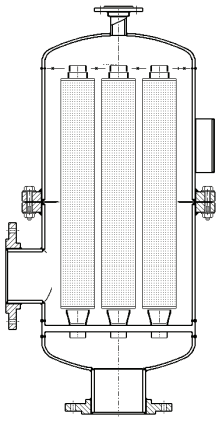
N1



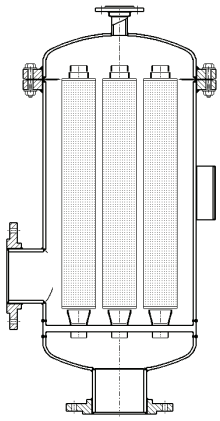
N2



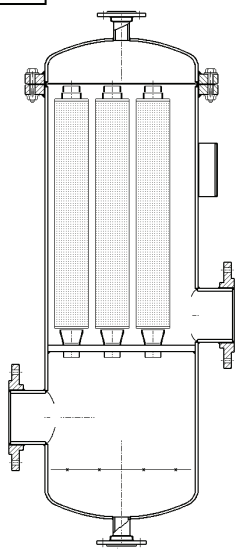
N3



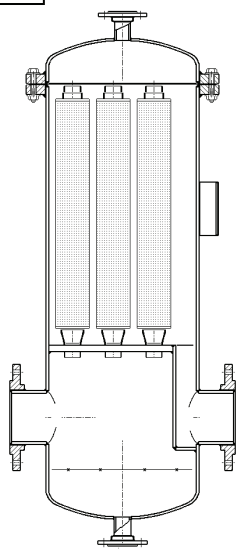
N4



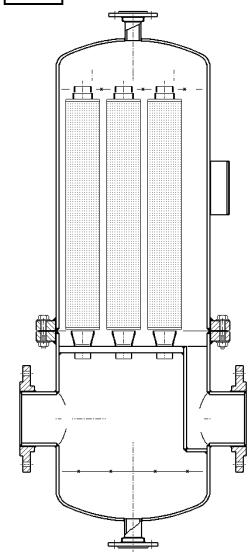
N5



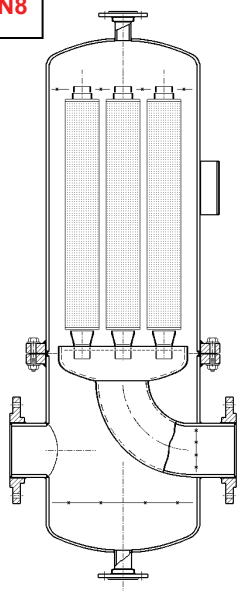
N6



N7



N8



PB

Multi-cartridge filter housings for water medium-high flow rates

PB series includes multi-cartridge filters designed for industrial water filtration.

MAIN FEATURES

- Body material: AISI 316
- Manufacturing in accordance with: 2014/68 / EU art. 4.3
- No. of cartridges: 15 - 18 - 22
- Cartridge configuration: A1 (DOE double open ended)
- Nominal cartridge length: 20” or 40”
- Type of connections IN / OUT: Floating flanges EN1092
- IN / OUT connections sizes: DN80 - DN100 - DN150
- Surface finish: pickling + passivation
- Stainless steel brackets for ground fastening

Filter housing codes as per table below
Outline drawings on the back of this page

MAIN APPLICATIONS

- Water filtration upstream ion exchange resins
- RO prefilters
- Downstream ultrafiltration (UF) safety filtration
- Leachate filtration
- Water filtration for any civil / industrial use

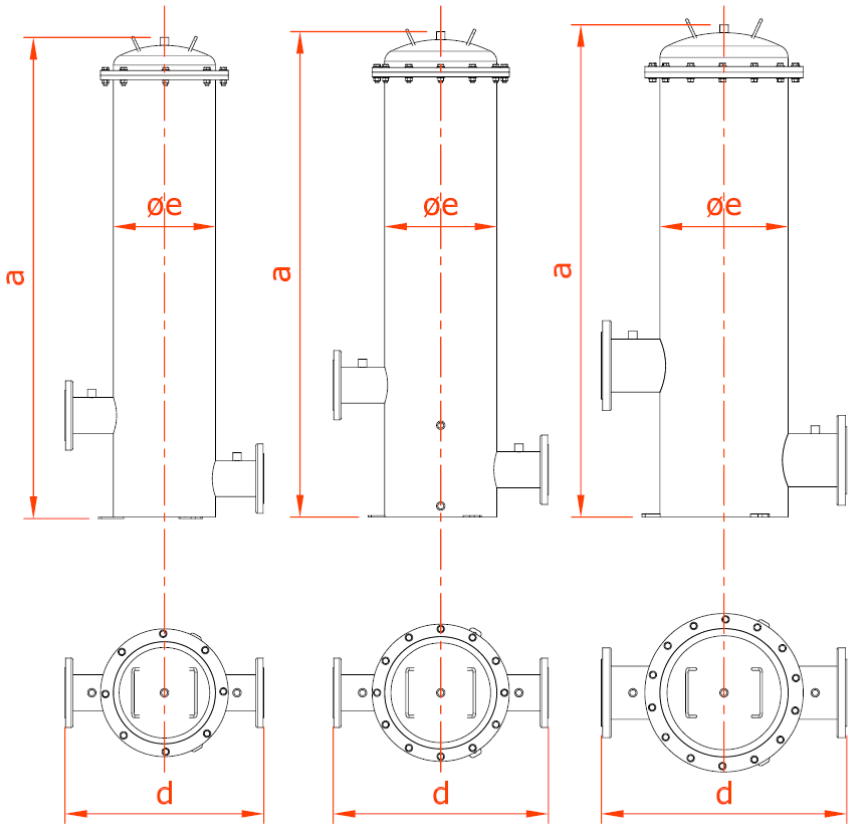
HOUSING CODE SELECTION

Multi-cartridge filter housings	N° of cartridges	Material	Cartridge length	IN/OUT connection style	IN/OUT connection size	Cartridge Configuration	Surface finish
series = PB	15 18 22	316ss = S	20” = 2 40”= 4	Floating Flange EN1092 = FF	3” = 80 4” = 100 6” = 150	DOE = A1	Pickling = J
PB	18	S	4	FF	100	A1	J

Warning: PB filters are not designed for gas filtration

:

PB



PB standard cartridge filter housings

Type	N° of Cartridges	Dimensions mm a	b	c	d	øe	IN/OUT standard connections	Directive 2014/68/UE good manufacturing practice art.4.3 Internal volume - lt	liquids group 1	liquids group 2
PB15S2FF80A1J	15 x 20"	1270	320	120	630	323,9	DN80 EN1092	81,00	-	8 bar
PB15S4FF80A1J	15 x 40"	1520	320	120	630	323,9	DN80 EN1092	121,00	-	8 bar
PB18S2FF100A1J	18 x 20"	1290	420	150	680	355,6	DN100 EN1092	100,00	-	8 bar
PB18S4FF100A1J	18 x 40"	1540	420	150	680	355,6	DN100 EN1092	148,00	-	8 bar
PB22S2FF150A1J	22 x 20"	1310	480	180	780	406,4	DN150 EN1092	131,00	-	8 bar
PB22S4FF150A1J	22 x 40"	1560	480	180	780	406,4	DN150 EN1092	195,00	-	8 bar

Important note:
Directive 2014/68/UE "PED" intends to regulate the use of pressure vessels for industrial plant applications.
The table above summarizes dimensions and design of PB filters and refers to art. 4.3 of the PED, as a consequence the use of PB filters is limited to liquids belonging to Group 2.
Pressure vessels manufactured in accordance with Article. 4.3 do not require **CE** stamp.
According to regulations each PB is supplied with instruction manual and declaration of conformity.

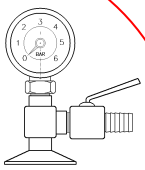
PB filters are not designed for gas filtration

Standard filter housings for sanitary applications

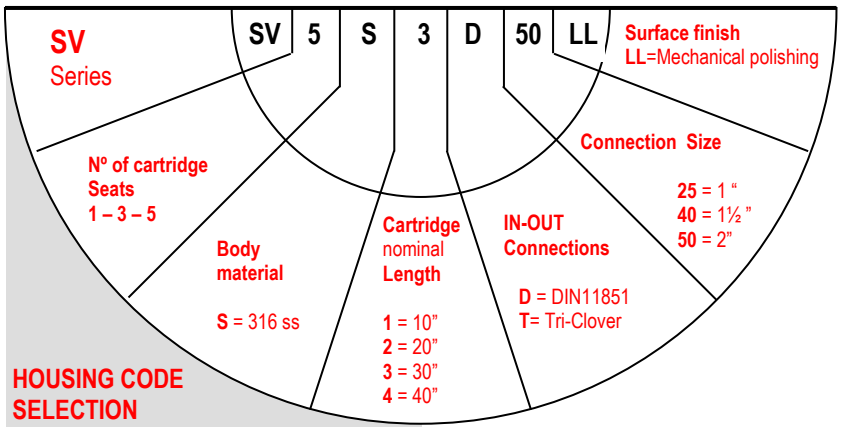
series SV

- Suitable for fine and ultra-fine applications
- All models hold P7 bayonet locked filter elements – O.R. 226
- Easy maintenance – quick release system to hold the bell
- Easy to clean - low roughness of the inner surface and unique design of the removable internal parts
- Minimum internal volume to reduce loss of product
- Sanitary design allows full access to all parts
- Accurate surface treatment

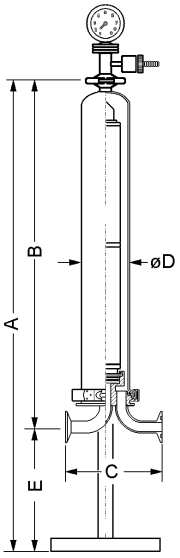
OPTIONAL FITTINGS FOR **SV** SERIES



- Pressure gauge/vent assembly
- Drains & sampling ports on application



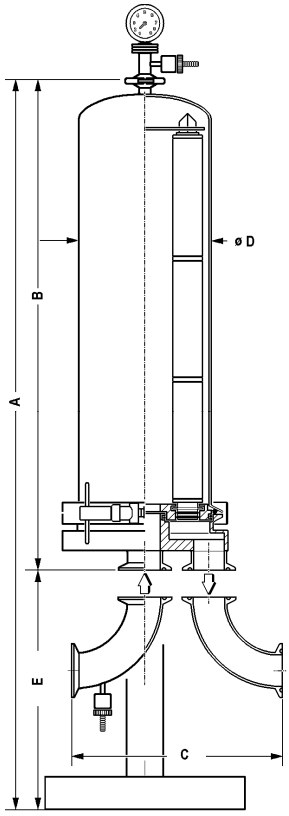
Single cartridge SV 1



	Type	N° of cartridges	Cartridge configuration	Dimensions mm A	B	C	ø D	E	In-out connection size
SERIES 1	**SV1S1 #25 LL**	1 x 250 mm (10")	P7	685	470	204	101,6	215	# = T = ø1"
	SV1S2 #25 LL	1 x 500 mm (20")	P7	935	720	204	101,6	215	Tri-Clover
	SV1S3 #25 LL	1 x 750 mm (30")	P7	1185	970	204	101,6	215	# = D = DN25
	SV1S4 #25 LL	1 x 1000 mm (40")	P7	1435	1220	204	101,6	215	DIN11851

- Max operating pressure for all **SV** filter housings: 10 bar – Flow rates as per filter cartridge curves
- All dimensions correct at time of going to press. Filterflo reserves the right to modify dimensions without prior notice

Multi cartridge SV 3 and SV 5



	Type	N° of cartridges	Cartridge configuration	Dimensions mm A	B	C	ø D	E	In-out connection size
SERIES 3	**SV3S1 #40 LL**	3 x 250 mm (10")	P7	959	495,6	284	168,3	463,4	# = T = ø1½"
	SV3S2 #40 LL	3 x 500 mm (20")	P7	1209	745,6	284	168,3	463,4	Tri-Clover
	SV3S3 #40 LL	3 x 750 mm (30")	P7	1459	995,6	284	168,3	463,4	# = D = DN40
	SV3S4 #40 LL	3 x 1000 mm (40")	P7	1709	1245,6	284	168,3	463,4	DIN11851
SERIES 5	**SV5S1 #50 LL**	5 x 250 mm (20")	P7	984,5	514,1	349	219,1	470,4	# = T = ø2"
	SV5S2 #50 LL	5 x 500 mm (20")	P7	1234,5	764,1	349	219,1	470,4	Tri-Clover
	SV5S3 #50 LL	5 x 750 mm (30")	P7	1484,5	1014,1	349	219,1	470,4	# = D = DN50
	SV5S4 #50 LL	5 x 1000 mm (40")	P7	1734,5	1264,1	349	219,1	470,4	DIN11851

- Max operating pressure for all **SV** filter housings: 10 bar – Flow rates as per filter cartridge curves
- All dimensions correct at time of going to press. Filterflo reserves the right to modify dimensions without prior notice

MRS1

Standard bag filter housing

Classic single bag filter housings manufactured by automated processes to provide high quality and consistency.

Benefits:

- Standard material 316L ss
- Automated welding system in Argon
- A press forming of the filter body now replaces the conventional ring usually welded inside the filter to support the restrainer basket and to provide the seat for the bag.
- Very small internal volume, minimum loss of product
- The lid provided with a hinge, is held by means of standard reclining clamps, PTFE gasket could be easily compressed
- Stainless steel adjustable legs as a standard for size 1, size 2 and size 6
- Electropolished restrainer basket, full penetration welding between cilynder and perforated cap
- Our restrainer basket fits most of the standard filter housing
- Suitable to hold filter bags provided with metal ring as well as the ones provided with plastic "snap ring"
- Standard IN-OUT ports threaded 2" BSP (size 1, 2 & 6)
- Standard IN-OUT ports threaded 1 ½" BSP (size 3 & 4)
- Flanged version available on application
- Versions "food & beverage" and "pharma" provided with suitable IN-OUT ports.
- Standard in & out surface finish; pickling + electropolishing

HOUSING CODE SELECTION

Standard single bag filter housing	Body material	Clamps material	Bag size	IN-OUT connections	IN-OUT connection size	Surface finish
series = MRS1	304ss = W 316ss = S	304ss = W	1 = 1 2 = 2 6 = 6 1M = 3 2M = 4	BSP male = G BSP female = E DIN11851 liner = D DIN/BSP flange = F ASA flange = A Tri-Clover = T	1" = 25 1½" = 40 2" = 50 2½" = 65 3" = 80	Electropolishing = E Manual polishing = L
MRS1	S	W	2	G	50	E

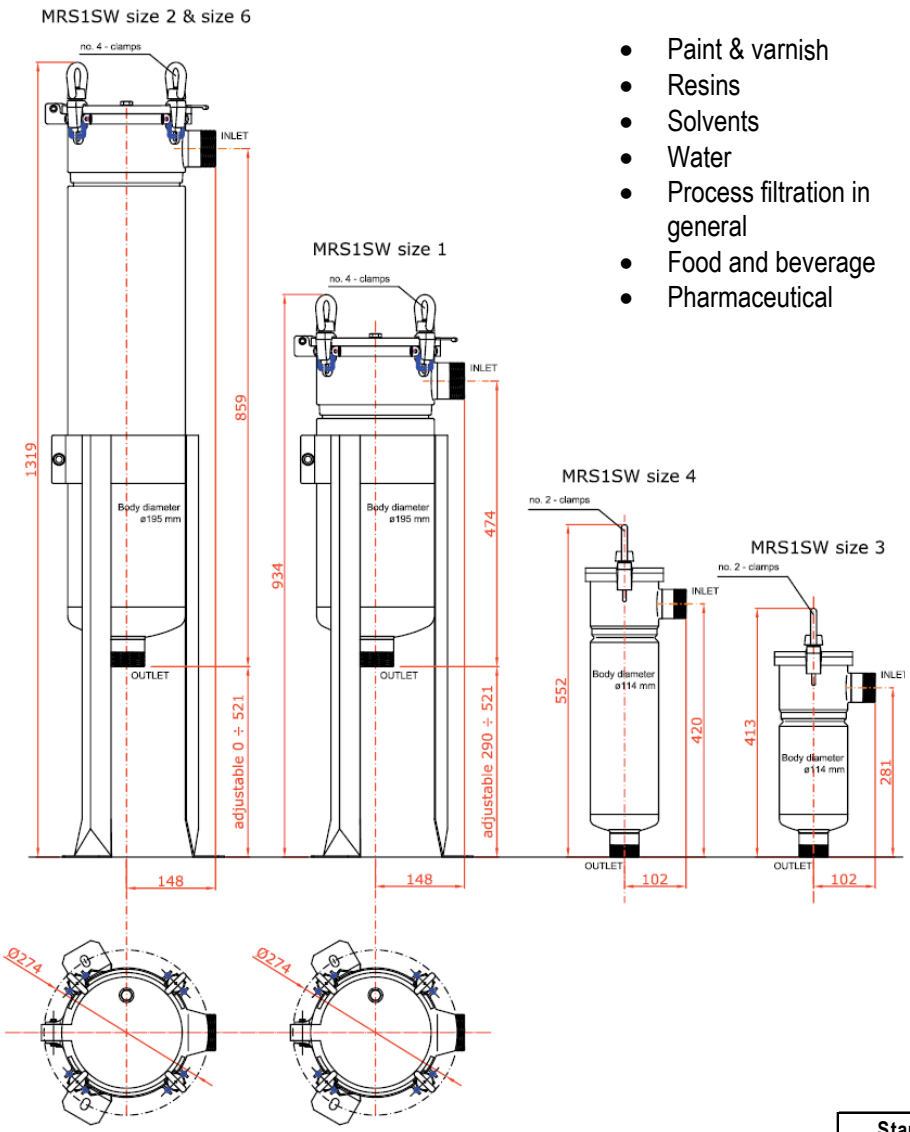
Working conditions of MRS1 series: Max temperature: 100°C with water
Max pressure = 8 Bar

Note: Please choose the appropriate filter element from our **"Filter bags"** data sheet

MRS1

Main applications

- Paint & varnish
- Resins
- Solvents
- Water
- Process filtration in general
- Food and beverage
- Pharmaceutical



Type	Filter bag size	Standard IN-OUT connections	Sound Engineering Practice directive 2014/68/UE art 4.3		
			Internal Volume Litres	liquids	
				Group 1 PSx V=200	Group 2 PSx V=10000
MRS 1 SW3 G 40	Size 3 (ø102 x 229)	1½" BSP male	2,70	8 bar	8 bar
MRS 1 SW4 G 40	Size 4 (ø102 x 381)	1½" BSP male	4,10	8 bar	8 bar
MRS 1 SW1 G 50	Size 1 (ø178 x 419)	2" BSP male	13,90	8 bar	8 bar
MRS 1 SW2 G 50	Size 2 (ø178 x 813)	2" BSP male	24,60	8 bar	8 bar
MRS 1 SW6 G 50	Size 6 (ø178 x 1600)	2" BSP male	24,60	8 bar	8 bar

OPTIONAL FITTINGS AVAILABLE FOR **MRS1** SERIES

- Pressure gauge/vent assembly
- Evacuation float

Note:
According to the Directive 2014/68/UE "PED" - MRS1 pressure filter housings are manufactured as "Sound Engineering Practice" (art. 4.3.) do not require the CE stamp when handling "group1" fluids, nor handling "group 2" fluids (essentially water). Please see table above for max operating pressure.

Max operating temperature: in function of the liquid, the vapour tension must not exceed 0.5 bar (in any case the max temperature of the gasket must be always considered)
In accordance with the regulation each housing is provided with Instruction Handbook and Filterflo declaration of compliance.

MRS1 series is not designed for gas filtration, please contact Filterflo for details

MGS1

Heavy duty bag filter housings

Benefits:

- Best value for money
- Design pressure 16 bar(*)
- Lid held by means of eye nuts, one of them acts as hinge
- No tools to open and close the lid
- New lid sealing system, the innovative gasket groove is designed to prevent gasket elongation
- Reliable sealing of the lid also with rigid PTFE O-Rings

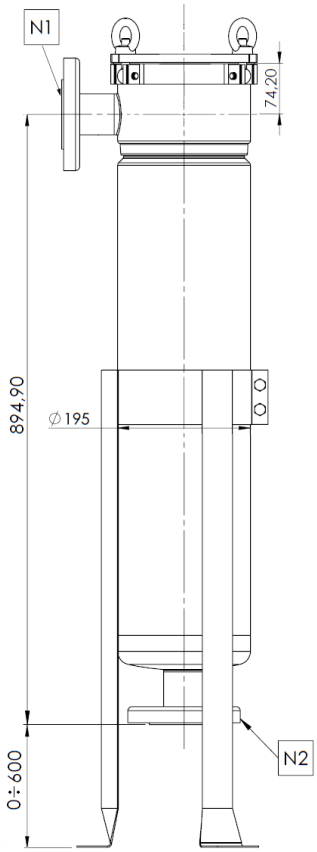
(*) – Carbon steel eye nuts max pressure 16 bar
– Stainless steel eye nuts max pressure 12 bar

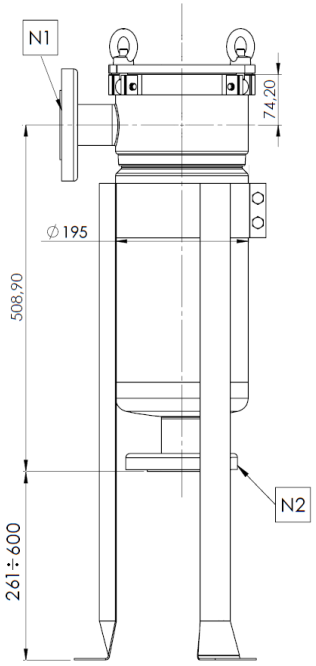
HOUSING CODE SELECTION

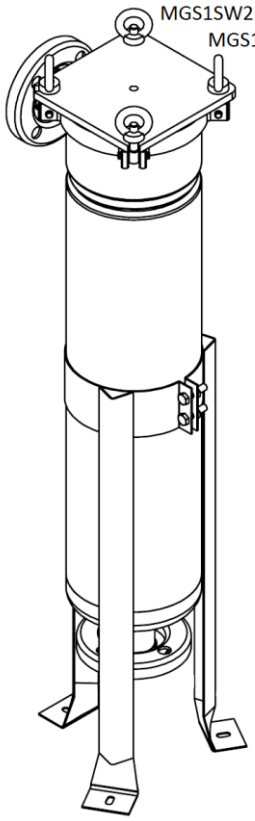
Standard single bag filter housing	Body material	Eye nuts Material	Bag Size	IN-OUT connections	IN-OUT Connection Sizes available	Surface finish
series = MGS1	304ss = W 316Lss = S	304ss = W Carbon steel = Z	1 = 1 2 = 2 6 = 6	BSP thread = G DIN11851 = D BSP Flange = F Loose Flange = FF ANSI Flange = A Tri-Clover = T	2" = 50 3" = 80	Pickling = J E-polishing = E
MGS1	S	W	2	FF	50	E

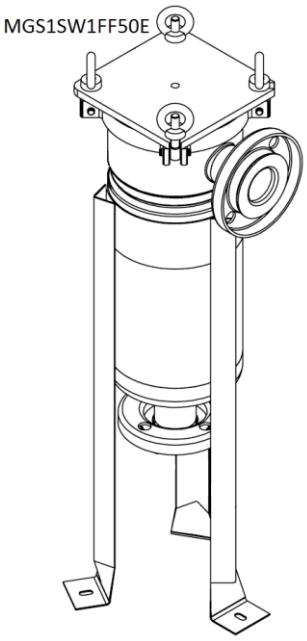
Working conditions of TGS1 series: Max temperature in relation to gasket material limits
Max pressure = 16 Bar at 100°C fluid water

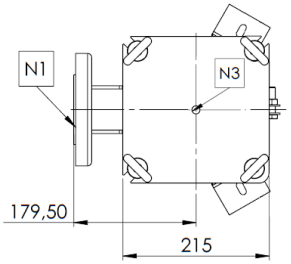
MGS1

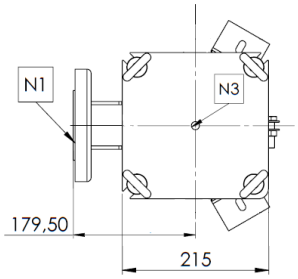












N3	1/4"	BSP	BSP	VENT
N2	DN50	16	DIN2642	OUTLET
N1	DN50	16	DIN2642	INLET
POS	***SIZE***	***PN***	***TYPE***	***SERV***

CODE	Bag Size	Standard IN-OUT connections	Manufacturing according to directive 2014/68/UE: Internal Volume Litres	liquids: Group 1 PSxV=200	liquids: Group 2 PSxV=10000
MGS 1 SZ1 FF 50	Size 1 (ø178 x 419)	DN50	13,90	14,3 bar	16 bar
MGS 1 SZ2 FF 50	Size 2 (ø178 x 813)	DN50	24,60	10 bar	16 bar
MGS 1 SZ6 FF 50	Size 6 (ø178 x 1600)	DN50	24,60	10 bar	16 bar

Notes:
Directive 2014/68/UE "PED", regulates the use of pressure tanks with liquid hazardous and non-hazardous, filters MGS1 can either fall into what art 4.3 prescribes or fall in the category I.

The above table provides general guidelines on the applicability and limitations of use, our offices are at your disposal to provide appropriate assistance for an optimal choice.

MAIN APPLICATIONS

- Paint & varnish
- Resins
- Solvents
- Water
- Process filtration in general
- Industrial washing machinery
- Chemicals

OPTIONAL FITTINGS AVAILABLE

- Pressure gauge/vent assembly
- Evacuation float
- Internal support for magnetic separators
- Magnetic separators

PGS1

Standard bag filter housing

Cost effective single bag filter housings for industrial applications

Benefits:

- Standard material 304 ss
- Automated welding system in Argon
- The press forming of the filter body replaces the conventional ring usually welded inside the filter to support the restrainer basket and to provide the seat for the bag.
- Very small internal volume, minimum loss of product
- Lid held by means of standard eye nuts, PTFE gasket could be easily compressed
- Stainless steel adjustable legs as standard equipment
- Accurate construction of restrainer basket, full penetration welding between cylinder and perforated cap
- Our restrainer basket fits most of the standard filter housing
- Bag seat can accept both filter bags provided with plastic ring as well as the ones provided with metallic ring
- Standard IN-OUT connections – 2" BSP
- Threaded or floating flanges available on application
- Standard surface finish – pickling

Please select the correct part number from the table below, outline dimensions can be found on back of this page.

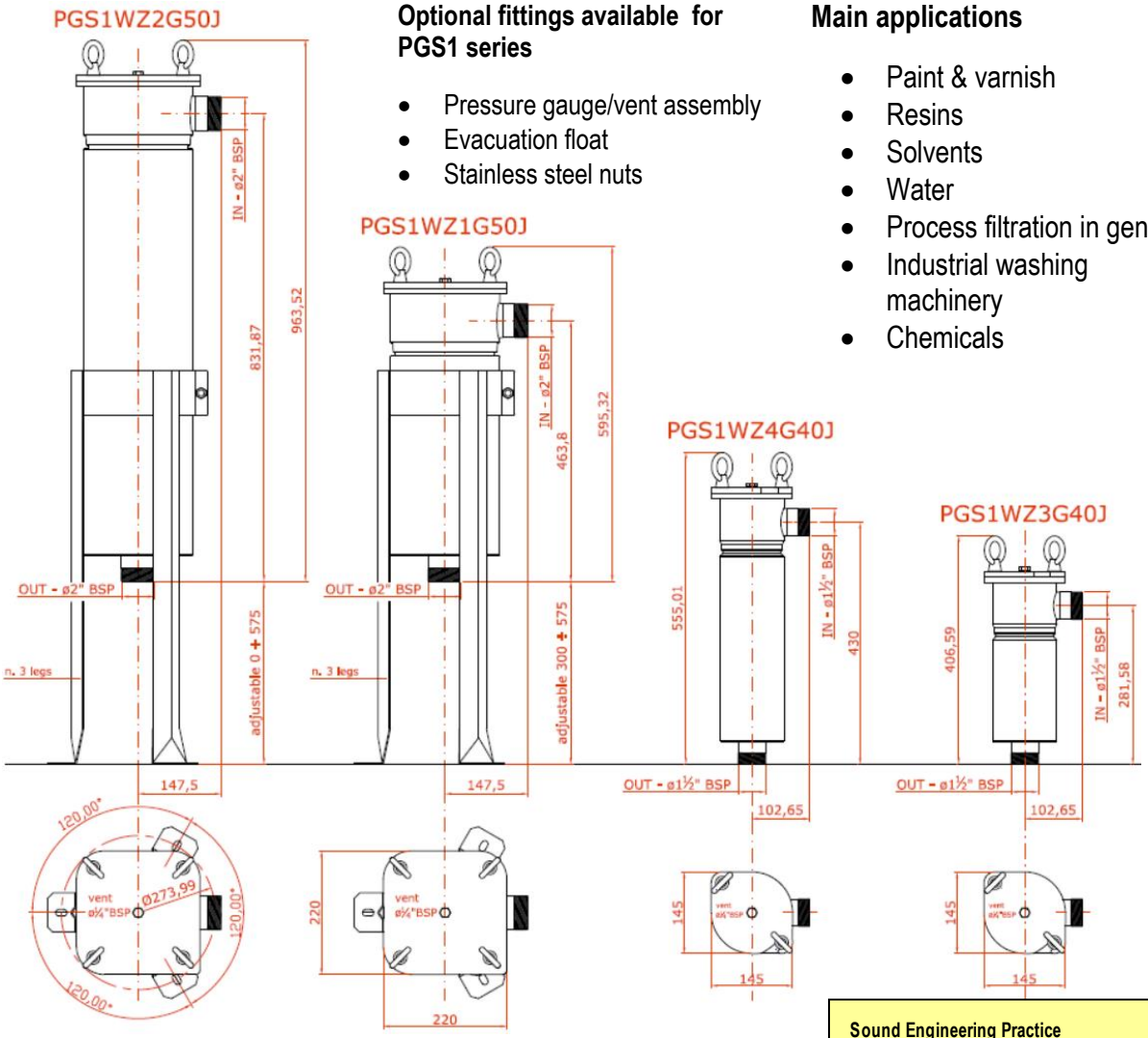
HOUSING CODE SELECTION

Standard single bag filter housing	Body material	Nuts material	Bag size	IN-OUT connections	IN-OUT connection size	Surface finish
series = PGS1	304ss = W	Zinced = Z 304ss = W	2 = 2 1 = 1 2M = 4 1M = 3	BSP male = G Flange = F	1 ½" = 40 2" = 50 3" = 80	Pickling = J
PGS1	W	Z	2	G	50	J

Working conditions of PGS1 filter housings: Max pressure = 8 Bar at 100°C with water

Note: PGS1 filter housings provided with IN-OUT special connections are available on application for small series

PGS1



Optional fittings available for PGS1 series

- Pressure gauge/vent assembly
- Evacuation float
- Stainless steel nuts

Main applications

- Paint & varnish
- Resins
- Solvents
- Water
- Process filtration in general
- Industrial washing machinery
- Chemicals

Type	Filter bag size	Standard IN-OUT connections	Sound Engineering Practice directive 2014/68/UE (art. 4.3)		
			Internal Volume Litres	liquids	
				Group 1 PSxV=200	Group 2 PSxV=10000
PGS 1 WZ2 G 50	Size 2 (ø178 x 813)	2" BSP male	24,60	8 bar	8 bar
PGS 1 WZ1 G 50	Size 1 (ø178 x 419)	2" BSP male	13,90	8 bar	8 bar
PGS 1 WZ4 G 50	Size 2M (ø102 x 381)	1 ½" BSP male	4,10	8 bar	8 bar
PGS 1 WZ3 G 50	Size 1M (ø102 x 229)	1 ½" BSP male	2,70	8 bar	8 bar

Note:
According to the Directive 2014/68/UE "PED" - PGS1 pressure filter housings are manufactured as "Sound Engineering Practice"(art. 4.3) they do not require the CE stamp when handling "group1" fluids, nor handling "group 2" fluids.
Please see table above for max operating pressure.
Max operating temperature: in function of the liquid, the vapour tension must not exceed 0.5 bar (in any case the max temperature of the gasket must be always considered)
In accordance with the regulation each housing is provided with Instruction Handbook and Filterflo declaration of compliance.
PGS1 series is not designed for gas filtration, please contact Filterflo for details

QGS1

Standard bag filter housing
Size 3 & 4

Benefits:

- Accurate cost-effective construction
- Automated welding system in Argon
- The press forming of the filter body replaces the conventional ring usually welded inside the filter to support the restrainer basket and to provide the seat for the bag.
- Very small internal volume, minimum loss of product
- Lid held by means of standard eye nuts, PTFE gasket could be easily compressed
- Accurate construction of restrainer basket, full penetration welding between cylinder and perforated cap
- Our restrainer basket fits most of the standard filter housing
- Bag seat can accept both filter bags provided with plastic ring as well as the ones provided with metal toric ring
- Threaded or floating flanges available on application
- Standard surface finish – pickling

Please select the correct part number from the table below, outline dimensions can be found on back of this page.

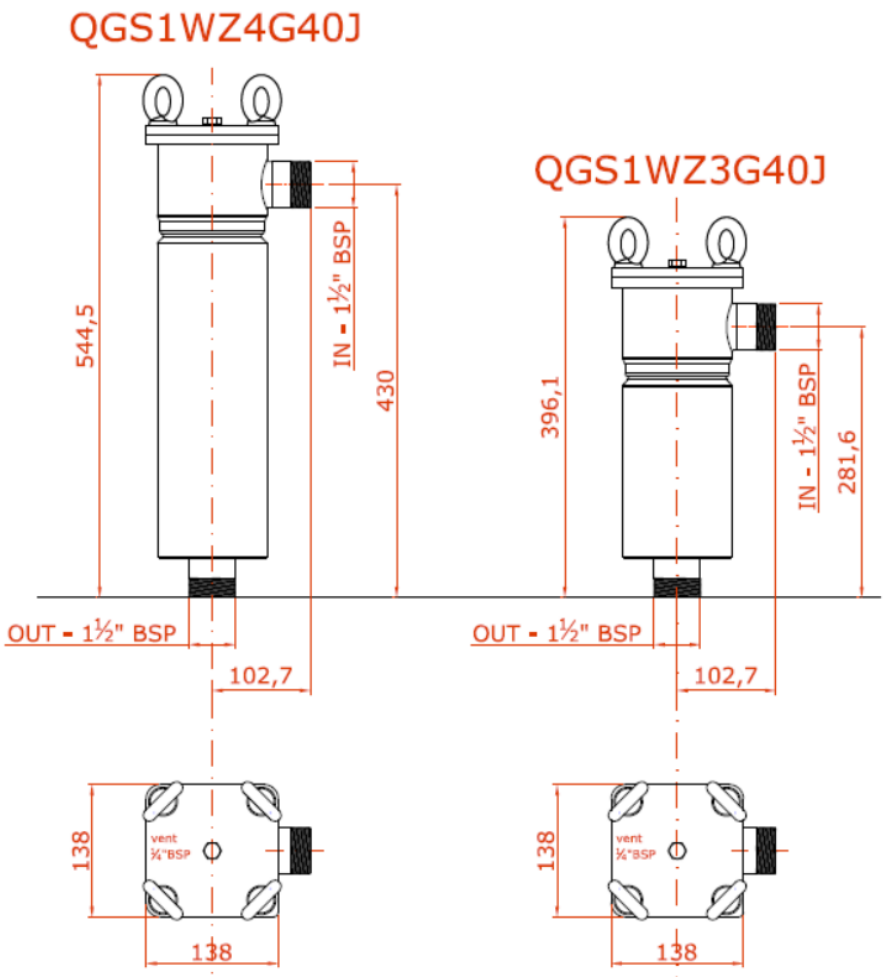
HOUSING CODE SELECTION

Standard single bag filter housing	Body material	Nuts material	Bag size	IN-OUT connections type	IN-OUT connection size	Surface finish
series = QGS1	304ss = W	Acciaio zinc. = Z 304ss = W	2M = 4 1M = 3	BSP male = G Flange = F Floating flange = FF	1" = 25 1 ½" = 40	Pickling = J
QGS1	W	Z	4	G	40	J

Working conditions of PGS1 filter housings: Max temperature in relation to gasket material
Max pressure = 8 Bar at 100°C with water

Note: QGS1 filter housings provided with IN-OUT special connections are available on application for small series

QGS1



Main applications

- Paint & varnish
- Resins
- Solvents
- Water
- Process filtration in general
- Industrial washing machinery
- Chemicals

Optional fittings available for QGS1 series

- Pressure gauge/vent assembly
- Evacuation float

Type	Filter bag size	Standard IN-OUT connections	Sound Engineering Practice directive 2014/68/UE (art. 4.3)		
			Internal Volume Litres	liquids	
				Group 1 PSxV=200	Group 2 PSxV=10000
QGS 1 WZ4 G 40	Size 2M (ø102 x 381)	1 ½" BSP male	4,10	8 bar	8 bar
QGS 1 WZ3 G 40	Size 1M (ø102 x229)	1 ½" BSP male	2,70	8 bar	8 bar

Note:
According to the Directive 2014/68/UE "PED" - QGS1 pressure filter housings are manufactured as "Sound Engineering Practice"(art. 4.3) they do not require the CE stamp when handling "group1" fluids, nor handling "group 2" fluids.
Please see table above for max operating pressure.
Max operating temperature: in function of the liquid, the vapour tension must not exceed 0.5 bar (in any case the max temperature of the gasket must be always considered)
In accordance with the regulation each housing is provided with Instruction Handbook and Filterflo declaration of compliance.
QGS1 series is not designed for gas filtration, please contact Filterflo for details

TGS1

Heavy duty TOP-INLET PN16 bag filter housings

Benefits:

- Best value for money
- Design pressure 16 bar
- Hinged lid
- No tools to open and close the lid
- Closing the lid presses on the filter bag sealing ring
- Reliable sealing of the lid also with rigid PTFE O-Rings

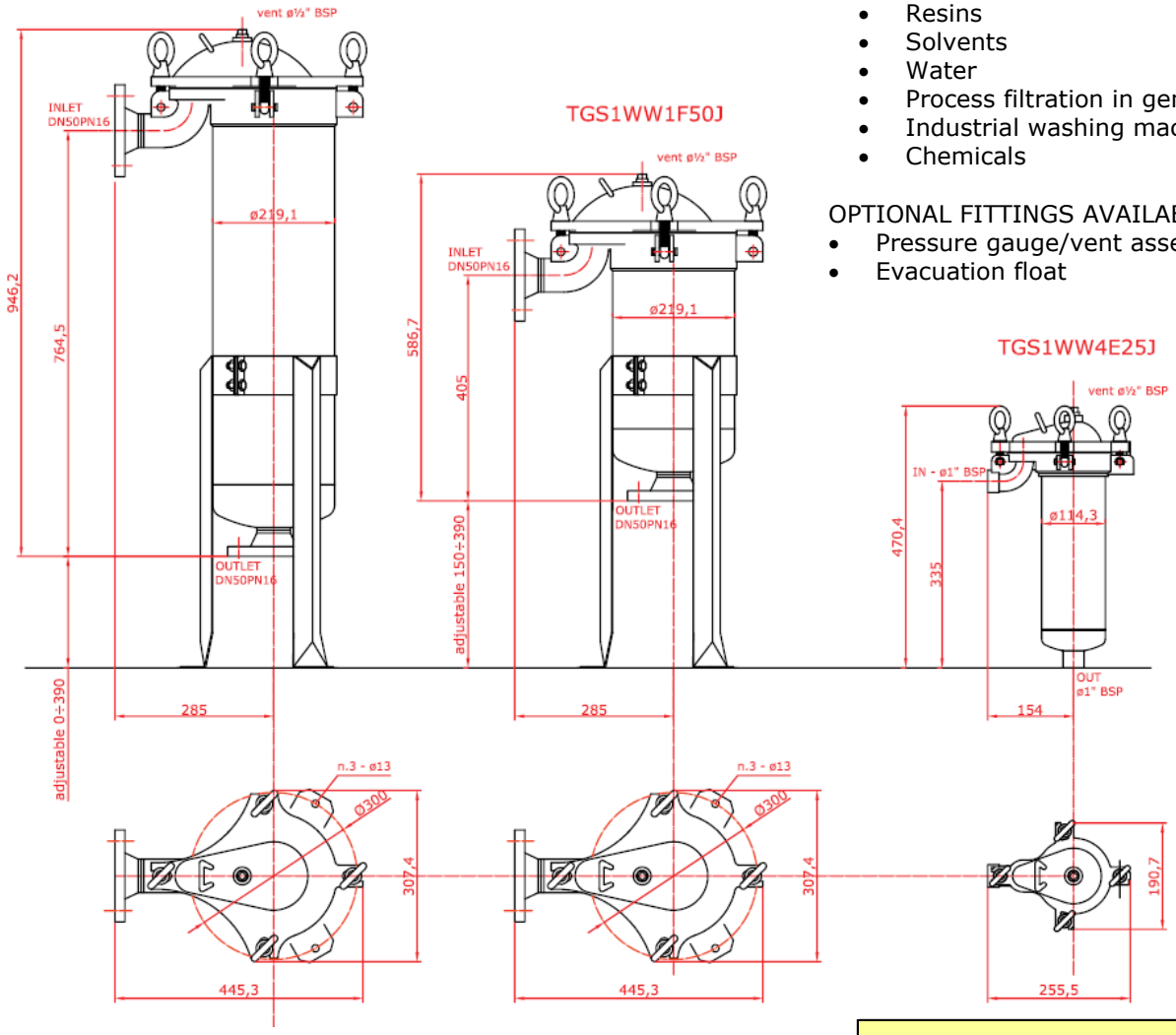
HOUSING CODE SELECTION

Standard single bag filter housing	Body material	Eye nuts material	Bag Size	IN-OUT connections	IN-OUT Connection Sizes available	Surface finish
series = TGS1	304ss = W 316ss = S	304ss = W	1 = 1 2 = 2 6 = 6 2M = 4	BSP Thread = E PN16 Flange = F #	ø1" = 25 ø2" = 50	Pickling = J E-polishing = E
TGS1	W	W	2	F	50	J

Working conditions of TGS1 series: Max temperature in relation to gasket material limits
Max pressure = 16 Bar at 100°C with water

TGS1

TGS1WW2F50J
TGS1WW6F50J



MAIN APPLICATIONS

- Paint & varnish
- Resins
- Solvents
- Water
- Process filtration in general
- Industrial washing machinery
- Chemicals

OPTIONAL FITTINGS AVAILABLE

- Pressure gauge/vent assembly
- Evacuation float

Model	Filter bag size	IN-OUT standard connections	directve 2014/68/UE - cat. I		
			Internal Volume Litres	liquids	
				Group 1 PSx V=5000	Group 2 PSx V=10000
TGS 1 W(S)W4 E(F) 25	Size 2M (ø102 x 381)	ø 1" BSP or flange DN25	3,80	16 bar	16 bar
TGS 1 W(S)W1 E(F) 50	Size 1 (ø178 x 419)	ø 2" BSP or flange DN50	17,52	10 bar	16 bar
TGS 1 W(S)W2 E(F) 50	Size 2 (ø178 x 813)	ø 2" BSP or flange DN50	30,00	10 bar	16 bar
TGS 1 W(S)W6 E(F) 50	Size 6 (ø178 x1500)	ø 2" BSP or flange DN50	30,00	10 bar	16 bar

Notes:
Directive 2014/68/UE "PED", regulates the use of pressure tanks with liquid hazardous and non-hazardous, filters TGS1 can either fall into what art 4.3 prescribes or fall in the category I.

The above table provides general guidelines on the applicability and limitations of use, our offices are at your disposal to provide appropriate assistance for an optimal choice.

HVS

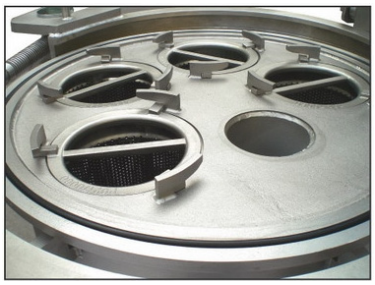
Quick release multi-bag filter housing

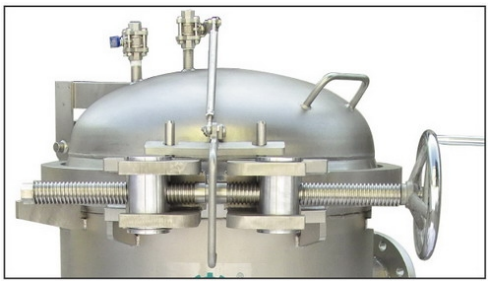
BENEFITS

- Tangential outlet for complete drainage
- Vee-band quick release docking system
- Easy lid lifting by means of a gravity balance mechanism
- User safety, lid can be opened only when internal pressure is at zero
- Available special restrainer baskets to double filter area (see SX/SY data sheet)

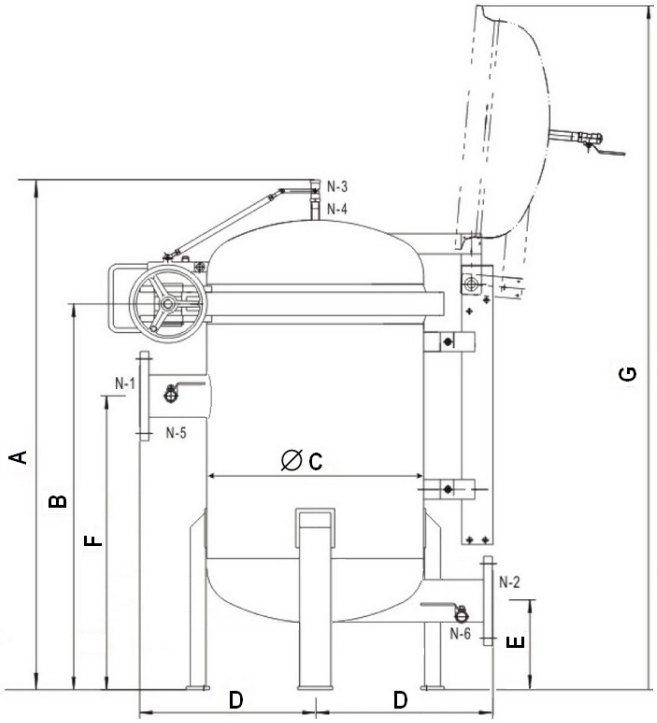
MAIN APPLICATIONS

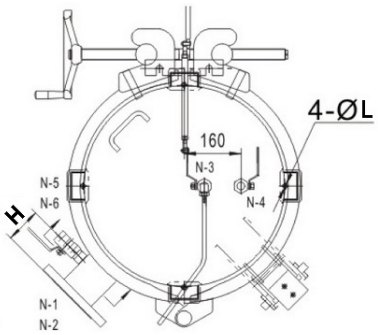
- Cataphoresis
- Paint
- Resins & polymers at high temperature in combination with Nomex or PTFE filter bags
- Vegetal and mineral oil
- Solvents
- Chemicals compatible with stainless steel
- Water and aqueous liquids



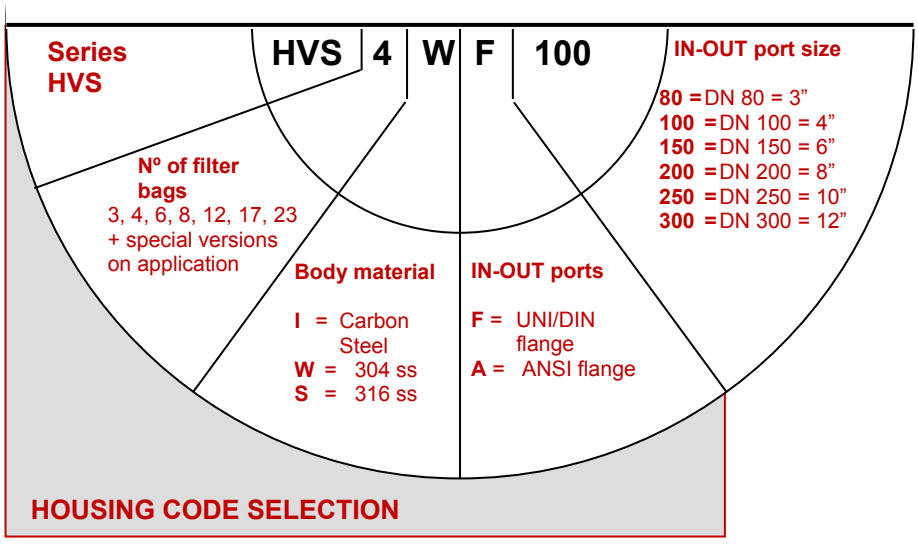


HVS Quick release multi-bag filter housing





Type	N° of filter bags	Dimensions mm (*) A	B	ø C	D	E	F	G	H	L	IN-OUT port size
HVS 3 F 80	3	1350	965	506	400	200	725	1641	100	14	DN 80 PN 10/16
HVS 4 F 100	4	1404	987	556	450	225	752	1768	100	14	DN 100 PN 10/16
HVS 6 F 125	6	1445	1030	608	500	250	750	1834	100	14	DN 125 PN 10/16
HVS 8 F 150	8	1495	1034	766	575	254	754	2027	100	14	DN 150 PN 10/16
HVS 12 F 200	12	1568	1050	966	650	254	754	2252	100	25	DN 200 PN 10/16
HVS 17 F 250	17	1808	1253	1066	790	400	830	2548	100	25	DN 250 PN 10/16
HVS 23 F 300	23	1847	1268	1220	820	400	912	2712	100	25	DN 300 PN 10/16



Notes:

(1) Approx dimensions, subject to change without notice

(2) Material sas per "Housing code selection"

(3) Standard design pressure 10 bar g, test pressure 14.3 bar g

(4) Standard housing accept "Size 2" filter bags

(5) Can be provide with "SY" restrainer baskets to double filter area, or with MultiFine filter elements to get 10 times the filter area of a conventional "Size 2" filter bag

Magnetic candle adaptor for standard bag filter housings

Description:

Interception by means of high magnetic flux density allows the removal of ferrous particles when the presence of the same is expected in the treated fluid.
Neodymium magnetic candles are coated with AISI 316 stainless steel tubes and are assembled with suitable supports to allow an easy installation into conventional bag filter housings.
They can be used as a sole stopping system, or in combination with a filter bag that provides to also carry out the physical interception of particles which are not attracted by magnets.

Benefits:

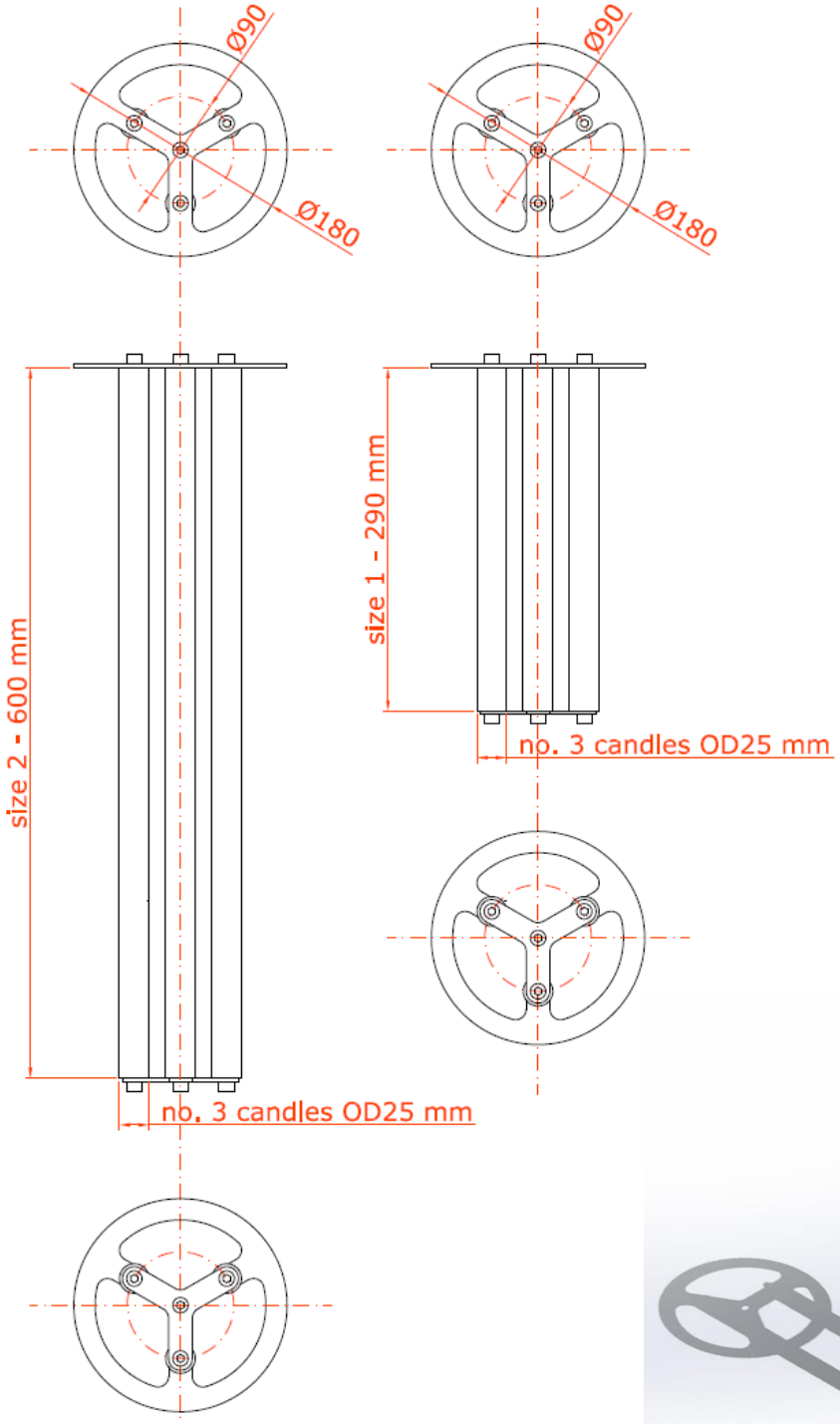
- Captures ferrous particles down to sub-micron dimensions
- 100% cleanability, no replacement due to prolonged use
- Absence of waste destined for disposal
- Suitable for contact with food substances thanks to the stainless steel coating

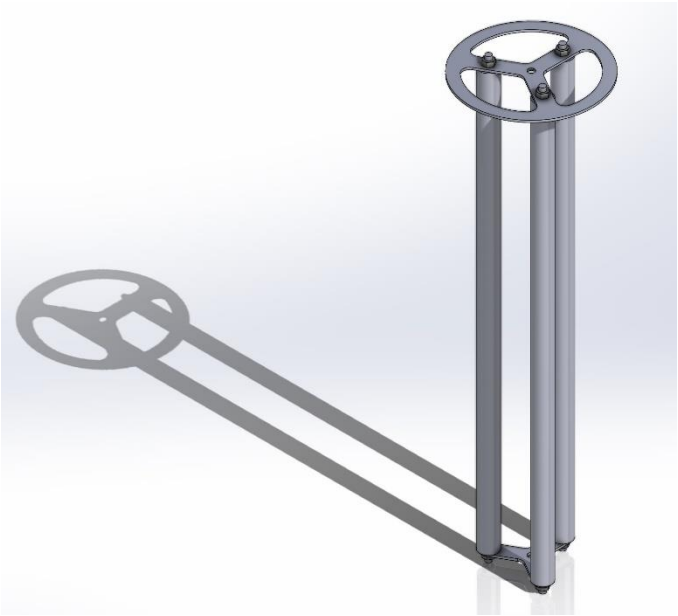
Technical features

Material	Neodymium N45
Candle diameter	25 mm
Length	In relation to the filter housing
Candle coating	AISI 316
Max working temperature	120°C
Nominal flux density	11000 Gauss

Ordering information

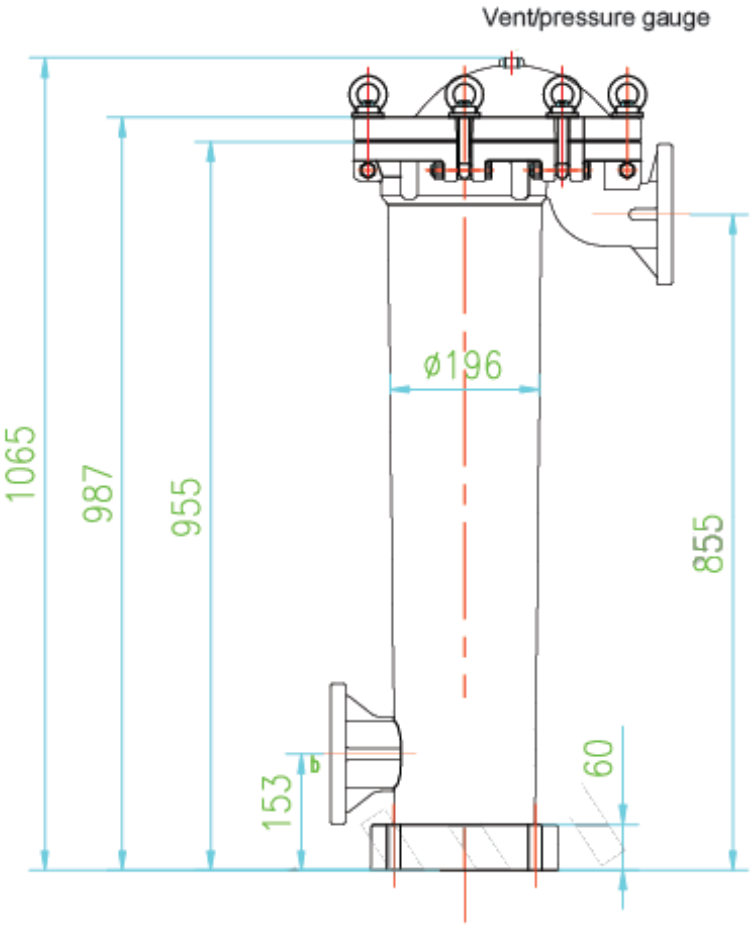
Code: PCM-SZ1-25-03	Size 1 bag filter housings with 3 magnetic elements
Code: PCM-SZ1-25-04	Size 1 bag filter housings with 4 magnetic elements
Code: PCM-SZ2-25-03	Size 2 bag filter housings with 3 magnetic elements
Code: PCM-SZ2-25-04	Size 2 bag filter housings with 4 magnetic elements

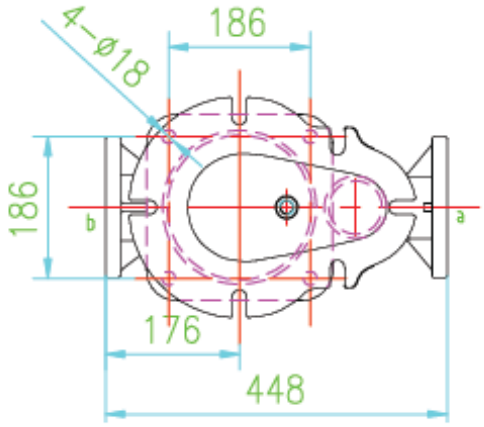




TGS1MS2F65B

Pipe List		
a	DN65	Inlet
b	DN65	Outlet
c	G1/2"	





TECHNICAL FEATURES

Material: PPR
Eyebolts: SUS316
Max.pressure: 0.8 MPa
Max.Temperature: 100℃

PPR polypropylene reinforced

PPR Bag Filter

1:10

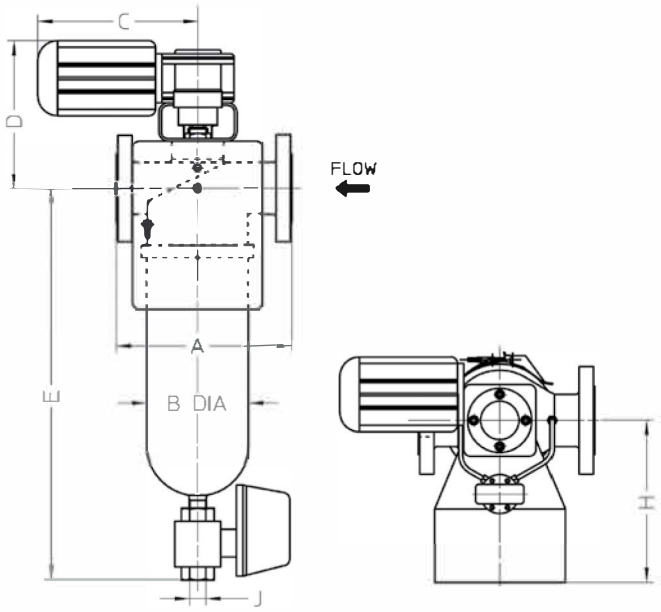
TGS1MS2F65B

Benefits of Self-Clean Filters

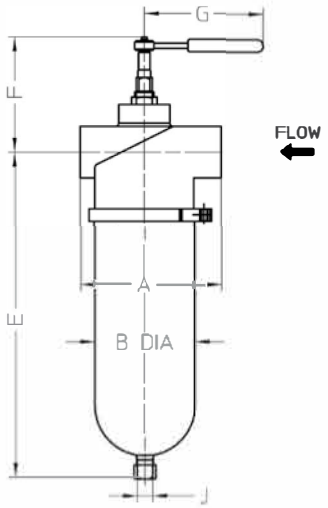
- Provides an efficient filtration solution for virtually any fluid with viscosity from a thick viscous resin and adhesive to water.
- Element cleaning without interrupting flow or losing system pressure or any fluid loss.
- Fully enclosed system with no operator contact with the fluid therefore ideal for hazardous or sensitive applications and also no chance of externally introduced contamination into the product.
- Cleaner and safer operating area.
- Manual or fully automated operation.
- Reduces labour cost associated with more traditional filtering methods such as strainers and bag filters and also minimises any production down time.

filtri per fluidi

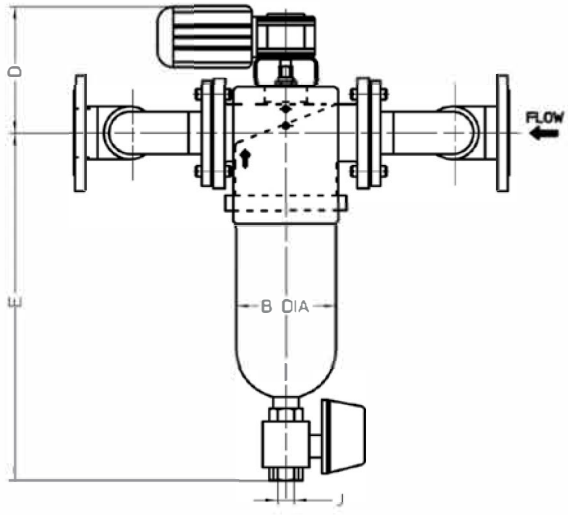
Flanged Filter, automated

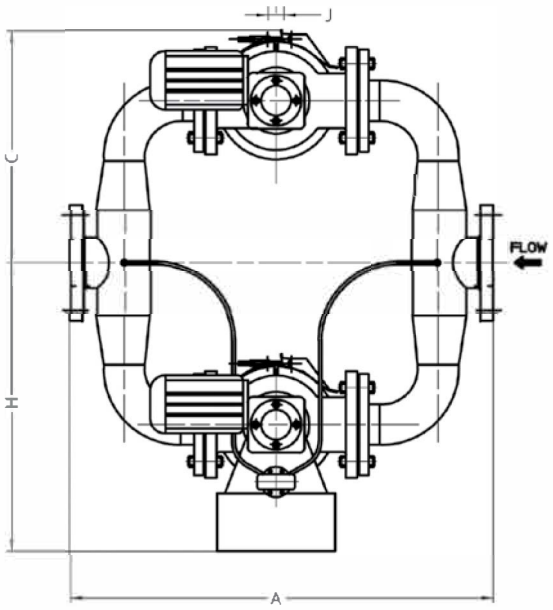


Threaded Filter, manual



Manifold DN100, flanged unit, automated





Bore Size	Flanged Filters	Threaded Filters	Common Dimensions (mm)								Mass (dry) kg			
											Flanged		Threaded	
	A	A	B	C	D	E	F	G	H	J	Manual	Auto	Manual	Auto
DN40	270	220	157	260	245	555	150	185	250	3/4"	24	35	18	29
DN50														
DN65														
DN80	299	-	192	260	255	645	190	185	250	1.5"	50	55	-	-
DN100	430	-	280	350	380	880	295	510	300	1.5"	285	385	-	-
DN100M	825	-	190	450	255	645	190	185	570	1.5"	220	240	-	-

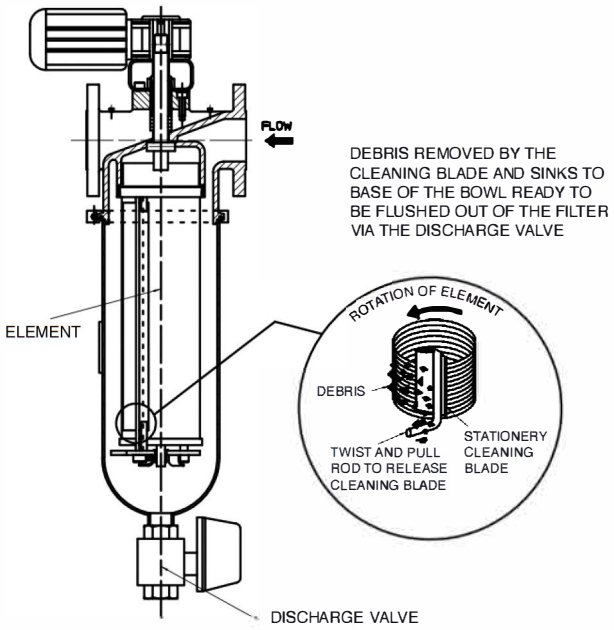
M = Manifold unit

filtri per fluidi

Range

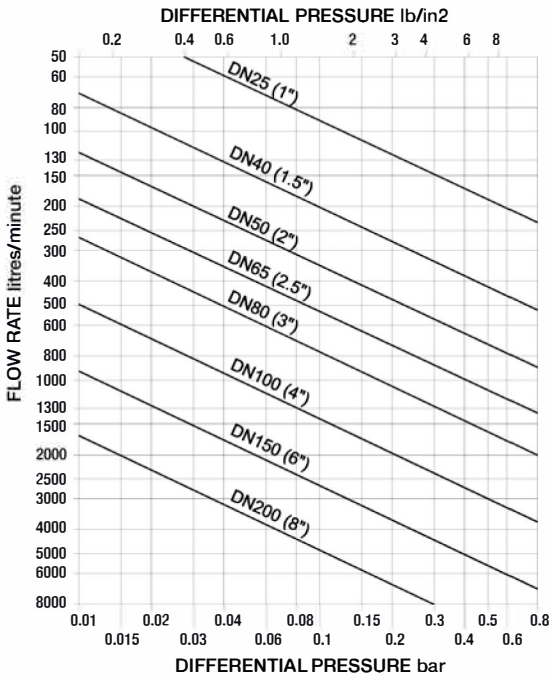
- 316 stainless steel wedge wire or perforated elements with filtration level from a coarse 6mm down to 50 micron and on some models 25 micron
- Available in cast iron, carbon steel or stainless steel. Other materials offered but not stocked
- Working pressure to 14 Barg (200psi) for the lower pressure range and up to 50 barg (725psi) for the higher pressure range*
- Manually cleaned by simply turning a ratchet handle or fully automated so no operator involvement is required
- High viscosity unit can feature reinforced elements and isolated pressure switch and heating jackets if required
- Unique twist and pull cam assembly so cleaning blades and element can be quickly and easily changed without tools

*Pressure stated at 50C. Pressure reduces with increasing temperature. We do not recommend the use of cast iron above 100C. For any application above 100C talk to our technical sales team. Max pressure on high pressure range specified to order.



Applications – Just a Few Examples

- Filtration of highly viscous epoxy and polyester resins during the manufacturing process
- Protection of a heat exchanger on sea water used for cooling
- Filtration of paints and varnishes replacing open sieves which can be subject to product contamination
- Replacing and extending the lift of filter bags and cartridges in an ink manufacturing facility
- Replacing a basket strainer used for the filtration of flushing water on mechanical seals on pumps in the paper and pulp industry



Flow Chart for Blade Type Self-Clean Filters

The chart is for water (1cSt) flowing through a filter with an element coarser than 1000 microns. Multiply the pressure drop by the following factors for different element micron ratings and different viscosities.

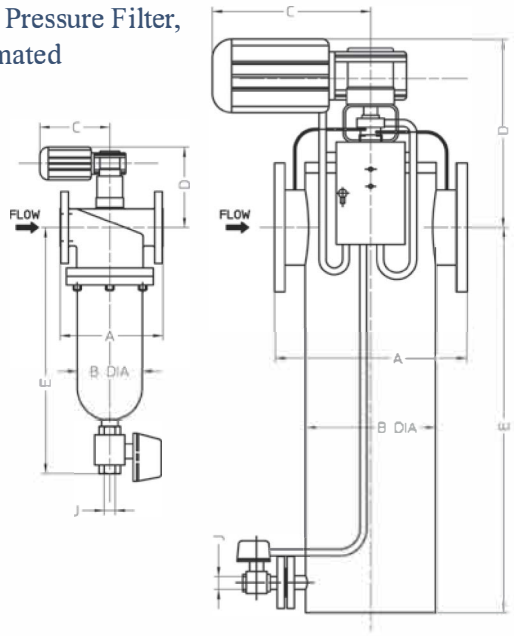
Viscosity (Centistokes)	Filtration Rating (microns)				
	50	100	200	500	1000
1	1.5	1.2	1.13	1.08	1.0
50	3.6	2.75	2.4	2.2	1.75
200	5	3.67	3.16	2.84	2.1
500	6.2	4.5	3.8	3.35	2.4
1000	7.6	6	5	3.9	3.6
5000	34	27	22	18	17

filtri per fluidi

The High Pressure Range

The higher pressure range is dimensionally and functionally similar to the low pressure range up to and including the DN80 model but features a flanged closure. Maximum pressures are specified to order.

High Pressure Filter, automated



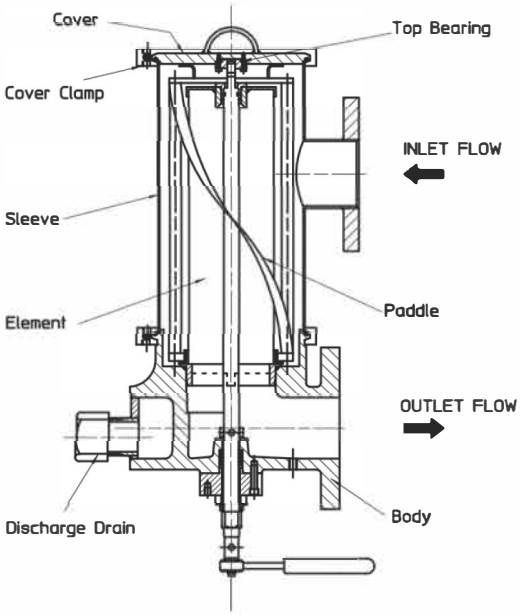
Bore Size	Common Dimensions (mm)						Mass (dry) kg	
	A	B	C	D	E	J	Manual	Auto
DN50S	270	157	260	245	445	3/4"	25	35
DN50	325				555		30	36
DN80	360	190	450	255	645	1.1/2"	50	55
DN100M							220	240
DN100	550	280	345	380	880		285	385
DN150		406		560	1170		380	480
DN200	870	700					850	1050
DN250	1000	800					1340	1640
DN300	1100	865					1830	2230

S = Threaded connections M = Manifold unit

The LPH Range

The LPH self-clean filter is ideally suited to those applications where regular stirring of fluid is beneficial and very low product loss is essential.

- Lift-out element and blade assembly for quick and easy change-over or cleaning
- Paddle stirs the fluid on the 'dirty' side of the element allowing agitation of the product and restricting build up of solids on the bowl
- Paddle directs the debris towards the discharge valve
- Optional paddle to stir the fluid on the 'clean' side of the element
- Self-draining at the end of a batch, minimising product losses
- Optional heating jacket
- High Pressure version available



- Simplex and duplex basket strainers
- Self-clean filters
- Temporary strainers
- Y type strainers
- Wedge wire elements

#

“DKF” filter sheets

Despite of all technological evolutions in the filtration field, one of the oldest systems of mechanical purification of the liquids, still maintains today a meaningful presence in the oenological/food & Beverage sectors as well as in chemical and pharmaceutical. Early 2009 Filterflo decides to approach the sector of filter sheets as a completion of its filter range, the “DKF”, developed in Italy constitutes an important technical novelty for the market.
One of the features of these filter sheets is their “formation”, in fact, unlike all the conventional filter sheets in which the suspension of the row material is spread in one solution on a suction belt, the “DKF” filter sheets are formed on a revolving drum so that the porous panel is created, progressively, in two times with particles of different size.
The drain of the water is not forced and this allows a higher uniformity of formation and consistent dimension and distribution of the pores of every single filter sheet. The aspect is smooth, compact and uniform but the micro-porous structure presents a void volume of 75-85% of the total and its “anisostropy” obtained with the progressive formation, allows a better dirt holding capacity and consequently a longer life. The filter sheets “DKF” are made of cellulose, diatomaceous earth and perlite, all components are fully approved to be used for food & beverage applications.

DKF 00 - The only one made from cellulose fibre only, high velocity of filtration also for viscous liquids.

DKF 0 - Fast coarse as the previous one, but with the absorption effects of charged materials.

DKF 3 - To clarify liquids with limited turbidity, good absorption capability

DKF 4 - To clarify liquids with polishing effects, pre-sterile to protect further fines stages, recommended for edible oil and sugar solution

DKF 5 - Medium polishing of liquids with a low viscosity. Filtration of extra virgin olive oil

DKF 7 - Good polishing effect with appreciable yeast interception

DKF 9 - Final polishing of fluids in pharmaceutical, cosmetic and food application, recommended for essential oils

DKF 10 - Pre-sterile stage, I guarantees almost complete removal of yeast and bacteria

DKF 15 - Sterile stage for liquids without sugar, good pre-filter up-stream membrane cartridges

DKF 20 - Sterile stage for liquids with a limited amount of sugar, full protection of membrane cartridges

DKF 30 - Sterile stage for sweet and sparkling wines, many applications in pharmaceutical sector

"DKF" FILTER SHEETS - USER INSTRUCTIONS

Filter sheets are essentially depth filters with absorption effects, to ensure the best performance in terms of efficiency and life it is essential to constantly check flow-rate and differential pressure, the recommended limits should not be exceeded. Although both sides of "DKF" filter sheets look the same, they are one way filter where the inlet is the side carrying logo and type

TYPE	Flow-rate l/h per sheet 40x40 cm	Differential pressure	Statistic Pore size	Particle retention	Filter ratio(*)
DKF 00	> 400	2,5 bar	42 micron	33 micron	1,3
DKF0	340	2	34	17	2
DKF 3	260	2	27	10	2,7
DKF 4	200	2	20	5	4
DKF 5	150	2	15	2,5	6
DKF 7	110	2	12	1,2	10
DKF 9	90	1,5	10	0,8	12,5
DKF 10	70	1,5	8	0,5	16
DKF15	50	1,2	6	0,3	20
DKF 20	30	1,2	5	0,25	20
DKF30	20	1 ,2	4	< 0,2	>20

(*) - The table comprehends the recommended working conditions, such as flow-rate and delta P plus the expected performance, typical porosity, particle retention and filter ratio, the latter is the relation between porosity and retention, it expresses the level of interception due to the absorption effect versus the physical capture of the particles.
That's a simple number but it shows how important is the absorption effect when fine grades are concerned, in fact the main benefit of filter sheets is to have a fine filtration together with large pores for contaminant storage.

"DKF" STANDARD DIMENSIONS

cm **40x40** filter area: 0,16 m²
cm **20x20** filter area: 0,04 m²
cm **32x32** filter area: 0,102 m²

ON APPLICATION:

cm **60x61** filter area: 0,366 m²

When large quantities are involved FILTERFLO can offer special sizes eventually provided with holes of various diameter. Various standard disks are also available

FOOD & BEVERAGE MATERIALS CONFORMITY

- D.M. 21 marzo 1973 (Italy)
- D.M. Min. San. 26 aprile 1993 n.220 sez.4 § 1,2,3;
- D.M. 30 ottobre 1991 n.408;
- B.G.A. XXXVI Papiere, Kartons und Pappen fuer Lebensmittelverpackungen, agg. del 01.08.1988 parte BIII;
- F.D.A. Title 21, agg. del 01.04.1987, part.176, sec.170

DETAILED DATA SHEETS ARE AVAILABLE FOR EACH SINGLE "DKF"MODEL

FILTER SHEETS ESTIMATED CROSS-REFERENCE

FILTER RETENTION	FILTERFLO ZF	FILTERFLO DKF	Seitz K	Seitz HS	Beco	Carlson	Filtrox	Cuno	Strassburger	Sartorius	Cordenons	Papelera del Besos	Industrial Filtro	Immer	Beaulieu
		DKF W	0-400 A		KG 0400D	W2	Filtrodur								
9 ÷10 µ	ZF 00	DKF 00	K 900	HS 9000	K 1	XE 5	AF 6				CKP V0	SA 010	A01	M1	
			K 800			XE 10	AF 9		Record	C 3				M2	
5 ÷ 6 µ	ZF 0	DKF 0	K 700	HS 6000	K 2	XE 20	AF 20	05 HB		C 5	CKP V4	SA 030	A3	M3	NCA30
3 µ	ZF 3	DKF 3	K 300				AF 30		K 3	C 7	CKP V8	SA 395	A10	M5	NCA50
			K 250	HS 4000	KD 3	XE 50	AF 40		K 5	C 8				M7	
2 µ	ZF 4	DKF 4	K 200	HS 2000	KD 5	XE 90	AF 50	10 HB	K 7	C 9	CKP V12	SA 595	A11	M10	NCA70
1,5 µ	ZF 5	DKF 5	K 150	HS 1600	KD 7	XE 150	AF 70		K 10	F 4H		SA 795	A12	MS20	NCA100
1 µ	ZF 7	DKF 7	K 100	HS 1000	KD 10	XE 200	AF 100	30 HB		F 7H	CKP V16	SA 895	A15	MS30	NCA120
0,8 µ	ZF 9	DKF 9	KS 80	HS 800	KDS 12	XE 280		60 HB	Steril V	S 3	CKP V18				NCA150
0,6 µ	ZF 10	DKF 10	KS 50	HS 600	KDS 15				Steril	S 5		SA 955	A25	MS50	NCAS180
0,45 µ	ZF 15	DKF 15	EK	HS 400	ST 40	XE 400	AF 110	70 HB		S 7	CKP V20	SA 995	A30	IM	NCAS250
			EK 1	HS 200	ST 60	XE 675			Steril S						
0,2 µ	SF 20	DKF 20	EKS	HS 100	ST 80	XE 1200	AF 130	90 HB		S 9	CKP V24	SA 997		IMS	NCAS300
0,1 µ		DKF 30	EKS1		ST 100	XE 1700	AF 140							IMS1	

#

“LQ” Filter Cardboards

Filter media made from pure cellulose and cotton linters, manufactured in a single layer, available a wide range of different weights from 250 to 720 g/m² . Thicknesses can vary from 0,63 to 1,9 mm to satisfy the demand of several application in industrial processes.
The table shows the most typical applications in relation to the intrinsic characteristics of each individual model

LQ 25 – 250 g/mq thickness 0,63 mm
Strong cardboard with fast filtration used on viscous liquids or with coarse contamonant in the sector of resins, inks and lacquers

LQ 34 – 340 g/mq thickness 0,82 mm
Cardboard with good mechanical characteristics when wet, medium velocity of filtration, suitable for aqueous fluids in chemical, electroplating and pharmaceutical sectors, typically used to remove fine particles, residual of activated carbon and for mineral and alimentary oils

LQ 40 – 400 g/mq thickness 1,20 mm
Softer, faster and more porous cardboard compared to the previous one used on viscous liquids as resins and varnishes in the chemical industry and sugar solutions or oils in the food industry

LQ 44 – 440 g/mq thickness 1,00 mm
Specially designed for olive oil and to other edible fluids such as spirits and soft drinks. Also suitable for many other industrial applications

LQ 47 – 470 g/mq thickness 1,20 mm
It combines a reasonable mechanical strength together with a good filtration velocity. Essentially dedicated to the filtration of extra virgin oil, also successfully employed in pharmaceutical and cosmetic sectors

LQ 60 – 600 g/mq thickness 1,60 mm
Soft and strong enough for the filtration of refined olive or vegetable oil, good also for medium viscosity liquids in the sector of paint and resins

LQ 65 – 650 g/mq thickness 1,60 mm
Stronger and more selective than the previous one, it is used in chemical-pharmaceutical sector to capture fine particles and almost total removal of carbon powder

LQ 72 – 720 g/mq thickness 1,90 mm
Same density of LQ 60 but higher weight and thickness, suitable for the same applications it offers a better efficiency in the range of fine particles

TYPICAL BEHAVIOUR

The contaminant capture is essentially due to the physical interception of the particles, negligible is the absorption effect because the media does not contain diatomaceous earth. Main applications are:

- **Solid/liquid separation**
  This is the most common application for industrial process

- **Liquid/liquid separation**
  One of the features of cellulose is to be highly hydrophilic. The result is a dramatic retention of the water present in oily fluids whether alimentary or not

- **Liquid/gas separation**
  Oil and water mist capture in gas service

- **Solid/gas separation**
  Particles elimination from air and gas in general

"LQ" FILTER CARDBOARDS STANDARD DIMENSIONS

LQ25
Disks dia cm 20,3 hole ø cm 3,3
Disks dia cm 25,6 hole ø cm 5,0
Disks dia cm 29,5 hole ø cm 5,0

LQ34
Disks dia cm 19,5 hole ø cm 6,0
Disks dia cm 20,0 hole ø cm 3,3
Disks dia cm 20,0 hole ø cm 5,0
Disks dia cm 20,5 hole ø cm 3,3
Disks dia cm 25,6 hole ø cm 5,0
Disks dia cm 29,5 hole ø cm 5,0
Disks dia cm 38,0 hole ø cm 6,0
Disks dia cm 46,0 hole ø cm 10,0
cm 30,5x53,8 - 2 holes
cm 31,0x31,0 - 1 hole
cm 32,0x32,0 - 2 holes
cm 32,0x32,0 - 4 holes
cm 40,0x40,0

LQ44
cm 40,0x40,0
cm 60,0x61,0
cm 80,0x80,0 - 1 hole

LQ47
cm 40,0x40,0
cm 32,0x32,0 - 2 holes
cm 32,0x32,0 - 4 holes

Various dimensions, different outer and hole diameters available upon customer request

A DETAILED DATA-SHEET OF EACH INDIVIDUAL PRODUCT IS AVAILABLE